DOCUMENT RESUME

ED 127 604 CS 002 920

AUTHOR	Winkeljohann, Rosemary, Comp.
TITLE	A Selective Bibliography of ERIC Abstracts for the Teacher of Reading, 1966-1974; VIII. Reading in the Content Area.
INSTITUTION	ERIC Clearinghouse on Reading and Communication Skills, Urbana, Ill.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C. Dissemination and Resources Group.
PUB DATE	Sep 76
CONTRACT	NEC-400-75-0029
NOTE	51p.; For related documents see CS002913-CS002919, CS002921
EDRS PRICE	MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS	*Annotated Bibliographies; *Content Reading; Elementary Secondary Education; Language Arts; Mathematics; *Reading; Reading Comprehension; *Reading Instruction; Reading Research; *Reading Skills; Sciences; Social Studies; Study Skills; Teaching Guides

ABSTRACT

This selective bibliography is one of nine documents compiled to provide titles and descriptions of useful and informative reading documents which were indexed into the ERIC system from 1966 to 1974. The 94 entries in this section of the bibliography concern reading in the content area and are arranged alphabetically by author in one of the following seven subcategories: social studies, English instruction, mathematics instruction, science education, language arts, comparison, and research. Author and subject indexes conclude the document. (JM)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED127604

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

A Selective Bibliography of ERIC Abstracts for the Teacher of Reading, 1966-1974: VIII. Reading in the Content Area

Compiled by

Sr. Rosemary Winkeljohann

National Council of Teachers of English

ERIC Clearinghouse on Reading and Communication Skills
1111 Kenyon Road, Urbana, Illinois 61801

CS 002 920

Published September 1976

ERIC Clearinghouse on Reading and Communication Skills
1111 Kenyon Road, Urbana, Illinois 61801

The material in this publication was prepared pursuant to a contract with the National Institute of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Prior to publication, the manuscript was submitted to the International Reading Association for critical review and determination of professional competence. This publication has met such standards. Points of view or opinions, however, do not necessarily represent the official view or opinions of either the International Reading Association or the National Institute of Education.

Introduction

One of the primary goals of the National Institute of Education and the Educational Resources Information Center (ERIC) is to transform the information found in the ERIC system into a format that will be useful to the classroom teacher, the administrator, and the curriculum developer. Such is the goal of this bibliography, which brings together titles and descriptions (abstracts) of useful and informative reading documents that were indexed into the ERIC system during the years from 1966 to 1974.

Using the descriptors Reading, Reading Research, and Reading Instruction, a computer search was made of the ERIC data base. Of the 5000 documents that were obtained through the search, 3000 entries were in the system at Level I or Level II, that is, were available on microfiche or in hard copy, a photographically reproduced, paper booklet. Each of these 3000 entries was considered for inclusion in the bibliography.

To aid in the selection of items for the bibliography, nine criteria were developed:

1. The study contributes to the profession through the use of constructive research procedures.
2. The information adds to current understanding of the reading process.
3. The document helps the teacher with realistic suggestions for classroom practices.
4. The study indicates trends for the teaching of reading; organizational patterns; methodology; and/or materials.
5. The document helps teachers to apply theories of learning to the teaching of reading.
6. The study clarifies the relationship of reading to other disciplines, such as linguistics and psychology.
7. The study leads to understanding special problem areas in teaching reading.

8. The document helps teachers to build curriculum or gives guidance in planning lessons.
9. The document will help readers to understand the state of the profession or the professionalism in the teaching of reading.

The criteria were reviewed and refined by Robert Emans, University of Maryland; Robert Bennett, San Diego (California) School District; Richard Hodges, University of Chicago; Willima Powell, University of Florida at Gainesville; Charles Neff, Xavier University; and Joanne Olsen, University of Houston.

In order to be included in the bibliography, a document had to meet at least four of the nine criteria. Of the 3000 Documents evaluated, 1596 were able to satisfy the requirements and were included. This section of the bibliography, Reading in the Content Area, has 94 entries. Other categories are:

1. Reading Process (280 entries)
2. Methods in Teaching Reading (190 entries)
3. Reading Readiness (131 entries)
4. Reading Difficulties (115 entries)
5. Reading Materials (245 entries)
6. Adult Education (201 entries)
7. Tests and Evaluation (231 entries)
8. Teacher Education (109 entries)

Subcategories were organized within each major category, and items were put into alphabetical order by author. Entries were then given numbers consecutive throughout the nine separate sections, and an author index and a subject index were prepared for each section. The subject indexes were prepared using the five major descriptors which were assigned to each document when it was indexed into the ERIC system. In both the author and the subject indexes, each item is identified by its ED (ERIC Document) number and by the consecutive number assigned to it in the bibliography.

Two other bibliographies are available which reading educators may find useful. They differ from this bibliography in that they are comprehensive rather than selective. Both of these publications include all the reading documents entered into the ERIC system by ERIC/RCS and by ERIC/CRIER. They are Recent Research in Reading: A Bibliography 1966-1969 and Reading: An ERIC Bibliography 1970-1972; both were published by Macmillan Information.

READING IN THE CONTENT AREA

I. Social Studies

II. English Instruction

III. Mathematics Instruction

IV. Science Education

V. Language Arts

VI. Comparison

VII. Research

Social Studies

1394. Connors, George C. A Comparison of General and Specific Reading Skills as Related to American History Achievement at the Eleventh-Grade Level. M.Ed. Thesis, Rutgers, The State University, New Brunswick, N.J., 1971, 66p. [ED 046 664]

Whether vocabulary and comprehension skills as measured by a content reading test were more related to achievement than the same skills as measured by general tests was investigated. The subjects were 140 high-school juniors. Also, whether or not there was a significant difference between high- and low-achievers in the skills measured was assessed using 31 high- and 39 low-achievers. The author-constructed American history reading test was used to measure vocabulary and comprehension skills in the content areas, and was compared to the same skills as measured by the Nelson-Denny Reading Test, the Davis Reading Test, and a history achievement test. The total scores of the American history reading test were found to correlate higher with history achievement than the scores of the general reading tests. All the subscores were also more closely related to achievement than the general reading scores, with the exception of reading for inference. A significant difference was found between the high- and low- achievers in all the skills measured, with the exception of reading for main ideas and reading for inference. It was concluded that a specialized vocabulary of historical terms was highly related to history achievement. References and graphs are given.

1395. Cooper, Minna; and others. Developmental Reading in Social Studies; The Local Community: Long Island and New York City. A Guide for Teachers, Grade 7, Revised. Nassau County, N.Y.: Sewanhaka Central High School District Number 2, 1964, 63p. [ED 022 658]

This guide is designed to provide seventh-grade social studies teachers with materials needed to present instruction in reading skills and to teach those facts, concepts, and attitudes which are the aim of social studies education. Entries on the subject of Long Island and New York City are arranged by topic, and material within each topic is arranged according to two texts: "Living in New York" by Flierl and Urell, to be used with modified classes, and "New York: The Empire State" by Ellis, Frost, and Fink, to be used with honors and average classes. To promote the development of comprehension, vocabulary, critical thinking, and study skills, the guide presents exercises in categorizing, reading for main ideas and supporting details, organization, and map-reading. Questions are designed to evaluate the student's mastery of these skills and of content subject matter. Some questions are designed to cover collateral chapters in the two books.

1396. Cooper, Minna; and others. Developmental Reading in Social Studies; New York State Government and Local Government. A Guide for Teachers, Grade 7, Revised. Nassau County, N.Y.: Sewanhaka Central High School District Number 2, 1964, 733p. [ED 023 549]

This guide is designed to provide seventh-grade social studies teachers with materials needed to present instruction in reading skills, and to teach those facts, concepts, and attitudes which are the aim of social studies education. Entries on the subject of New York state government and local government are arranged by topic, and material within each topic is arranged according to two texts: "Living in New York" by Flierl and Urell, to be used with modified classes, and "New York: The Empire State" by Ellis, Frost and Fink, to be used with honors and average classes. To promote the development of comprehension, vocabulary, critical thinking, and study skills, the guide presents exercises in outlining, critical reading, skimming, and interpreting charts and diagrams. Questions are designed to evaluate the student's mastery of these skills and of content subject matter. Some questions included are designed to cover collateral chapters in the two texts.

1397. Cooper, Minna; and others. Developmental Reading in Social Studies; Westward Expansion and Transportation in New York State. A Guide for Teachers, Grade 7, Revised. Nassau County, N.Y.: Sewanhaka Central High School District Number 2, 1964, 44p. [ED 022 659]

This guide is designed to provide seventh-grade social studies teachers with materials needed to present instruction in reading skills, and to teach those facts, concepts, and attitudes which are the aim of social studies education. Entries on the subject of westward expansion and transportation in New York State are arranged by topics, and material within each topic is arranged according to two texts: "Living in New York" by Flierl and Urell, to be used with modified classes, and "New York: The Empire State" by Ellis, Frost, and Fink, to be used with honors and average classes. The guide presents exercises to promote the development of vocabulary, comprehension, critical thinking, and map skills. Questions are designed to evaluate the student's mastery of these skills and of content subject matter. Some questions are designed to cover collateral chapters in the two texts and are so identified.

1398. Davis, O. L., Jr. Effectiveness of Using Graphic Illustrations with Social Studies Textual Materials. Final Report. Kent, Ohio: Kent State University, 1968, 127p. [ED 027 608]

Sponsored by the USOE Bureau of Research, this study explores the effectiveness of using graphic illustrations with written text in promoting learning in social studies by junior high students. Two groups of experimental reading materials, one group composed of three narratives with related graphic illustrations, and the other composed of three narratives alone, were prepared and administered to junior high students of comparable socioeconomic backgrounds in two schools. Graphic illustrations used were (1) a time-line with a historical narrative, (2) a product distribution map with a geographic narrative, and (3) a bar graph with an economic narrative. Tests over the materials were administered and results were analyzed using multivariate analysis, which considered student IQ scores and reading achievement as well as test scores. Conclusions were both methodological and substantive. It was found that (1) multivariate designs and analyses are superior to other methods in research on school learning, (2) a bar graph with text is superior to text alone in

facilitating junior high learning of social studies, and (3) a time-line with text and a product distribution map with text are not superior to text alone.

1399. Estes, Thomas H. Applying Research in Reading to Classroom Instruction in Social Studies. Paper presented at the International Reading Association Conference, Anaheim, Calif., May 6-9, 1970, 10p. [ED 041 720]

The focus of this paper is on three questions: (1) What reading skills are important to social studies achievement? (2) How can these skills be operationally defined for research and practice? and (3) How can the application of such research findings be effected? Several sources of research and discussions of reading and its relation to content areas are cited. It is pointed out that required reading skills generally fall into the areas of comprehension, vocabulary, and study skills. Operationalizing definitions of skills is discussed, and the conclusion reached is that to effect application of research findings to classroom practices, teachers must be involved in researching ideas to be applied in the classroom. A five-step applicative research model is described. The underlying concept in applicative research is explained as adapting a research idea to a limited and/or unique setting. The research findings must then be tested by replication with other groups. Figures and references are included.

1400. Fourth Grade Social Studies Units and Student Readings. Park Forest, Ill.: Park Forest Public Schools District 163, 1970, 68p. [ED 048 039]

This unit, produced under the sponsorship of USOE, focuses on the idea that people of different backgrounds interchange ideas and interact freely when there is open contact among groups within a city. Using Chicago as an example, the subgeneralizations which support this idea deal with immigrant groups, their traditions, cultural identity, and acculturation. Like other units in this series, detailed suggestions for learning activities and cognitive tasks are given, along with references to appropriate multimedia instructional materials. Suggestions for Chicago fieldtrips to supplement this unit are included. Several student readings cited in the guide form a part of this document. (See ED 048 035 for a listing of related documents.)

1401. Fried, Marian; and others. Developmental Reading in Social Studies; Civil War. A Guide for Teachers, Grade 8, Revised. Nassau County, N.Y.: Sewanhaka Central High School District Number 2, 1965, 79p. [ED 023 546]

This unit guide, fifth in a series of seven, is designed to provide eighth-grade social studies teachers with the material necessary for providing reading and study skills instruction while developing the facts, attitudes, and concepts of social studies. Information about the Civil War is found in two texts, Wilder and Ludlom, "This Is America's Story," and Swartz and O'Connor, "Exploring American History." The former is designed for use with average classes; the latter, with modified. Each chapter of materials contains exercises dealing with general vocabulary building, specific social studies vocabulary, terms dealing with people, places, and things, and tests for these words. Other exercises deal with notetaking, recall, and prereading skills such as use of the introduction, subchapter

and chapter headings, and pictures. Combined questions applicable to both textbooks are also provided.

1402. Fried, Marian; and others. Developmental Reading in Social Studies; Discovery and Exploration. A Guide for Teachers, Grade 8, Revised. Nassau County, N.Y.: Sewanhaka Central High School District Number 2, 1965, 99p. [ED 023 547]

This unit guide, first in a series of seven, is designed to provide eighth-grade teachers with materials for achieving the dual objectives of providing reading and study skills instruction while developing facts, attitudes, and concepts of social studies. Information about discovery and exploration is found in two texts: "This Is America's Story," for use with average classes and "Exploring American History," for use with modified classes. Each chapter of material contains exercises dealing with general vocabulary building, specific social studies vocabulary, terms dealing with people, places, and things, and tests for these words. Other exercises deal with notetaking, recall, and prereading skills such as use of subchapter and chapter headings and pictures. Combined questions applicable to both textbooks are also provided.

1403. Fried, Marian; and others. Developmental Reading in Social Studies; European Colonies in the New World and the Colonies Struggle for Independence. A Guide for Teachers, Grade 8, Revised. Nassau County, N.Y.: Sewanhaka Central High School District Number 2, 1965, 59p. [ED 023 548]

This unit guide, second in a series of seven, is designed to provide eighth-grade teachers with materials for reading and study skills instruction while developing the facts, attitudes, and concepts of social studies. Information about the European colonies in the New World and America's struggle for independence is found in two texts, "This Is America's Story," for use with average groups, and "Exploring American History," for use with modified classes. Each chapter of materials contains exercises dealing with general vocabulary building, specific social studies vocabulary, terms dealing with people, places, and things, and tests for these words. Other exercises deal with notetaking, recall, and prereading skills such as use of the introduction, subchapter and chapter headings, and pictures. Combined questions applicable to both textbooks are also provided.

1404. Fried, Marian; and others. Developmental Reading in Social Studies; Rise in Industry and Agriculture. Nassau County, N.Y.: Sewanhaka Central High School District Number 2, 1965, 104p. [ED 023 545]

This unit guide, sixth in a series of seven, is designed to provide eighth-grade teachers with materials for reading and study skills instruction while developing the facts, attitudes, and concepts of social studies. Information about the rise of industry and agriculture is found in two texts: "This Is America's Story," for use with average classes and "Exploring American History," for use with modified classes. Each chapter of material contains exercises dealing with general

vocabulary building, specific social studies vocabulary, terms dealing with people, places, and things, and tests for these words. Other exercises deal with notetaking, recall, and prereading skills such as use of the introduction, subchapter and chapter headings, and pictures. Combined questions applicable to both textbooks are also provided.

1405. Fried, Marian; and others. Developmental Reading in Social Studies: U.S. Becomes a World Leader. A Guide for Teachers, Grade 8, Revised. Nassau County, N.Y.: Sewanhaka Central High School District Number 2, 1965, 99p. [ED 024 530]

This unit guide, seventh in a series of seven, is designed to provide eighth-grade social studies teachers with materials that develop the facts, attitudes, and concepts of social studies and that also present reading and study skills instruction. Information about the United States as a world leader is presented along with reading exercises in assigned chapters of "This Is America's Story" by Wilder and Ludlom, a text to be used with average classes, and "Exploring America's History" by Schwartz and O'Connor, a text to be used with modified classes. New vocabulary words are introduced at the beginning of each chapter. Exercises provide practice in (1) making generalizations, (2) interpreting pictures, charts, and maps, (3) outlining, (4) reading under direction, and (5) the SQ3R study method. Questions directed to organization, cause and effect, and sequence and analogy are given. Combined questions applicable to both textbooks are also provided.

1406. Geyer, James R. Cloze Procedure as a Predictor of Comprehension in Secondary Social Studies Materials. Olympia, Wash.: State Board of Community College Education, 1968, 10p. [ED 039 157]

The major problem investigated was the effectiveness of cloze procedure as a predictor of a student's ability to comprehend social studies materials when compared with IQ scores, previous social studies grades, and standardized reading test scores. As a secondary purpose, the effectiveness of rewritten social studies materials as a means of improving comprehension was studied. As a preliminary, various readability measures formulas were reviewed. Those included were: Lively and Pressey, Gray and Leary, Lorge, Flesch, Dale-Chall. Research on the application and effect on comprehension of these formulas was also reviewed. Students completed a prereading cloze test from one of two texts utilized. They then read the chapter from which the cloze test had been constructed, and completed a fifty-item multiple-choice test. The cloze procedure was found not to be better than the other variables in predicting comprehension levels at the .01 significance level. however, it was significant at the .05 level. To fulfill the secondary purpose, two identical texts were used; however, the readability levels were different (grade 5-6, grade 7-8). A multiple-choice test was constructed to measure knowledge acquired after reading. It was found that reducing vocabulary difficulty and sentence complexity may not significantly improve comprehension scores.

1407. Goolsby, Thomas M., Jr.; Stoltman, Joseph P. Some Writing Experiences of Third Grade Students in Social Science and Reading. 1971, 83p. [ED 058 278]

Three sets of instructional materials were prepared by third graders after working with and responding to similar experimental materials in reading and social science. The curriculum begins at a point when most children are able to read; however, supplementary listening passages and other readiness training and assessment is provided for those who cannot. The material generally consists of short passages followed by multiple choice questions.

1408. Johnson, Roger E. How Readable Are Our Elementary Social Studies Textbooks? Paper presented at the International Reading Association Conference, Anaheim, Calif., May 6-9, 1970, 14p. [ED 043 459]

Major investigations have shown that children care little for social studies as a school subject. Therefore, a closer look was taken at social studies textbooks in order to ascertain if the reading difficulty of the texts was an important cause behind the children's dislike. This study evaluated the reading levels of 41 social studies texts adopted by the state of Florida for grades 1 through 6. The interest level of the material, any teacher-provided motivation, and methods of instruction were ignored. At the primary level, the Spache readability formula and the readability graph were used. For the intermediate-level books, the Dale-Chall formula, the Flesch readability formula, and the Fry readability graph were applied. It was found that all 41 texts had reading levels at or above the grade level for which they were intended and that 75 of the 128 readability levels obtained were above the designated grade level. References and tables are included.

1409. Kravits, Alvin. Teaching the Essential Reading Skills in Social Studies. Paper presented at the International Reading Association Conference, Seattle, May 4-6, 1967, 19p. [ED 014 378]

Teachers need to apply diverse techniques in teaching the reading skills students need to cope with the complex structure of social studies. A suggested overall approach covers a directed reading activity, vocabulary development, a study formula, and study skills instruction. Teachers College of Columbia University formulated a directed reading activity plan which includes readiness, concept development, silent reading, discussion, and rereading. Since social studies has its own unique vocabulary and since its textbooks involve more difficult reading, vocabulary development through context and word study would improve overall comprehension. A workable study formula is needed to help students study in this area. Robinson's SQ3R formula, modified for intermediate level, is illustrated in a sample of five steps--survey, question, read, recite, and review. A fourth area is the development of study skills involving evaluation and selection, organization, location of information, following directions, and other specialized skills. Karlin's checklist of study skills suggests a useful format for study skills instruction. Eighteen references on reading in the content areas are included.

1410. McCafferty, Donn. Imaginative Literature: Economics-Tonic. The Teachers Guide to Media and Methods 4 (1967): 41-43, 49-50. [ED 024 666]

Literature used as collateral reading can add "sparkle and bounce" to a course in economics without harming the basic principles of the science. The novel, since it is "Both lyric outcry and historical fact," is the most suitable vehicle for this endeavor, but poetry and drama may also be included. Many examples of works of literature can be found to illustrate economics units on "Labor and Management," on "Mining and Manufacturing," and on "Business and Finance." Selections could include a range of works from Dos Passos' "Adventure of a Young Man" and Orwell's "The Road to Wigan Pier" to Miller's "Death of a Salesman." This imaginative writing can help "dramatize, integrate, and enrich" economics courses as the student experiences economic forces through the eyes of the writer. Furthermore, an understanding of the economic powers depicted in a work of literature can deepen the student's appreciation of this literature.

1411. Otto, Wayne; and others. Wisconsin Design for Reading Skill Development: Rationale and Objectives for the Study Skills Element. Working Paper No. 84. Madison: Development Center for Cognitive Learning, 1972, 106p. [ED 070 072]

Essential skills and objectives for the Study Skills element of the "Wisconsin Design for Reading Skill Development," sponsored by the USOE Bureau of Research, are presented. Three major subareas--maps, graphs, and reference--and several substrands for each are identified. Sources consulted and a rationale for choosing specific skills are given.

1412. Preston, Ralph C., ed. A New Look at Reading in the Social Studies. Perspectives in Reading No. 12. Newark, Del.: International Reading Association, 1969, 75p. [ED 045 531. Document not available from EDRS. Available from International Reading Association ($3.00 members; $3.50 nonmembers)]

Five papers given at the International Reading Association conference held in conjunction with a National Council for the Social Studies conference in 1968 are presented in this work. Although each paper is addressed to a different subtopic, there is the common theme of the role that reading can play in social studies instruction. The subtopics are: (1) the importance of reading and writing in social studies; (2) the improvement of vocabulary through the use of linguistic techniques as opposed to routine vocabulary drill; (3) the use of controversial issues to stimulate reading; (4) the use of historical primary documents through reading and analysis to teach and learn history; and (5) the importance of induction and logical thinking in critical reading. Each paper contains a bibliography.

1413. Rauch, Sidney J.; Schleich, Miriam. Combining a Program of Reading Improvement with the Study of History. Boone, N.C.: National Reading Conference, 1967. [ED 016 570. Document not available from EDRS. Available from National Reading Conference, Appalachian State University]

A pilot program is being conducted at Hofstra University in Hempstead, New York, through the joint efforts of its reading center and history department. This coordinated history-reading program for college freshmen was developed to investigate the causes of students' difficulties in a course requiring extensive reading, to analyze the content of a freshman history course, and to improve the reading and study skills of college freshmen taking this course. Four instructors analyzed the content of the history course and the reading problems of the students, and then planned the content and structure of the coordinated course. Four history sections of thirty students each are being conducted. Two sections have fifteen students each attending the coordinated course on a voluntary basis. The other two sections have fifteen students each participating as a control group this term. These students will be the experimental students next term. In addition to attendance in the regular history course, the experimental students meet once a week at the reading center for three hours of instruction and practice in reading skills, notetaking, and study techniques using special materials to supplement the content of the history course. Performances in the two courses are graded separately and credited.

1414. Schriener, Robert L. A Logical Analysis of Reading Comprehension Skills in the Social Studies. Paper presented at the International Reading Association Conference, Kansas City, Mo., April 30-May 3, 1969, 12p. [ED 037 303].

As the result of an analysis and synthesis of reading comprehension skills studies, it was suggested that teachers attempt to simplify comprehension questions by recognizing two basic types: literal and nonliteral. It was noted that a student's success in obtaining meaning depends on (1) his competence in determining word meaning, (2) his understanding of word function and phrase-structure relationships. (3) his set awareness, (4) his mastery of reading skills, and (5) his teacher's attitude and competency. It was contended, after considering the factor-statistical analysis and the logical analysis approaches to determining reading comprehension skills, that a lack of consensus results necessitates the use of the simplified eclectic approach. Literal comprehension would include recalling fact and detail and determining the main idea of a passage; nonliteral comprehension would involve making decisions and judgments based on reading and relating reading experience to previously acquired knowledge and to other content. Determining cause and effect, making inferences, evaluating and criticizing, and determining authors' intents were given as nonliteral comprehension activities. Sample literal and nonliteral questions used in teaching and references are included.

1415. Seventh Grade Social Studies Units and Student Readings. Park Forest, Ill.: Park Forest Public Schools District 163, 1970, 90p. [ED 048 041]

Two main ideas form the focus of this interdisciplinary unit, which was produced under the sponsorships of USOE: (1) sub-Sahara Africa is a diverse geographic region with a little known but rich historical tradition; and (2) sub-Sahara Africa has thrown off colonial rule, and is developing modern societies that play an important role in the world today. The teaching guide and reading materials which comprise this document are both divided between these two ideas. Each section of the teaching guide includes subgeneralizations, suggestions of diverse instructional materials, and detailed guides for learning experiences. Geography, ancient and modern history, politics, and culture are among the many facets of Africa covered in this unit. (See ED 048 035 for a listing of related documents.)

1416. Sixth Grade Social Studies Unit and Student Readings. Park Forest, Ill.: Park Forest Public Schools District 163, 1970, 80p. [ED 048 040]

This unit, produced under the sponsorship of USOE, consists of a teaching guide and student reading materials, and focuses on the Mexican American as an object of social discrimination in this country. Utilizing books, poems, filmstrips, and tapes, as well as the reading materials provided, the Mexican-American history and culture are examined. Detailed learning experiences are suggested to aid student understanding of the generalizations for the unit. The main generalization is that "Discriminatory practices directed against Mexican-American citizens of the United States have limited opportunities for members of this group and deprived our society of their full contributions." This idea is supported by several subgeneralizations. (See ED 048 035 for a listing of related documents.)

1417. A Suggested Guide for Developing the Language Arts--Social Studies Program, Grade 8. Memphis, Tenn.: Memphis City School System, 1968, 159p. [ED 048 248]

This eighth-grade language arts-social studies curriculum guide has been compiled to help the teacher develop sequential, relevant, and unified teaching units in language arts and social studies. Materials include: (1) an overview of the general objectives, principles, and problems of an interdisciplinary approach; (2) such special aids for the teacher as formats for lesson plans, tests and methods for teaching capitalization, spelling, vocabulary, and word perception skills, and an explanation and adaptation of the survey-question-read-recite-review method of teaching reading; (3) a discussion of the correlated areas of grammar, spelling, vocabulary development, writing, literature, and American and Tennessee history from 1865 to the present; (4) daily lesson plans for six units on "Basic Human Needs," "Man and His Environment," "Man's Boundless Influence," "Man's Interdependence," "Man Meets the Challenge of Change," and "Man Attempts to Meet the Challenge of National and World Problems"; and (5) appendices which include enrichment ideas and alternate generalizations for each unit, a checklist for teacher-made tests, suggested classroom and other

resource materials, and a bibliography of curriculum development suggestions and of Tennessee and American history.

1418. United States History: The Black Perspective. A Guide for Eighth Grade Social Studies. Albany, N.Y.: State Education Department. Bureau of Secondary Curriculum Development, 1970, 233p. [ED 062 216. Document not available from EDRS. Available from New York State Education Department. ($1.00)]

This guide is intended to help the teacher with the curriculum integration process. It is specifically designed to provide illustrative material and narratives as raw material for an inductive approach to the examination of the role of the black in United States History. This guide should be seen as a tool to help implement the development of these themes in the classroom: (1) slavery and the struggle for preservation of black cultural traditions; (2) the concepts of race and racial identity in human history; (3) racism and the past and present treatment of ethnic groups in our culture. Suggestions for use of these reading selections are included both as a placement within the seventh- and eighth-grade social studies courses, and to possible questions to elicit discussion. Emphasis has been placed upon the use of original source materials, particularly eyewitness accounts and expressions of the black viewpoint. A complete bibliography of selected teacher source material is included. Both the reading selections and pictorial inclusions can be used for individual, small-group, or total-class consideration. This is not a student text; the type of source materials require the teacher to perform his editorial role. A projected second publication will include questions and subjects for depth study.

English Instruction

1419. Alston, Juanita S.; and others. Course of Study of Secondary Reading. A Supplement to the Course of Study in English, Grades 7-12. Pittsburgh: Pittsburgh Board of Public Education, January 1964. 59p. [ED 001 144]

The developmental reading in grades 7 through 12 was presented, giving procedure and techniques, reading materials, basic skills, enrichment, lesson plans, and a bibliography of recommended reading. Basic skills cited were phonetic and structural analysis, comprehension, location skills, vocabulary, and enrichment. Evaluation, organizing, and appraising material in silent and oral reading were stressed. Observable clues to poor reading are eye movements, lip and throat movements, head movement, position of the book, tensions such as gritting teeth and squirming, and low interest. Nine comparisons are shown between efficient and inefficient readers. Included is a list of resource materials including books, workbooks, mechanical devices, testing materials, films, and filmstrips. A diagrammatic plan of a reading laboratory is given. Two units of study, "Efficient Reading," and "Speed Power, and Proficient Reading," are outlined.

1420. Baranoff, Elizabeth S. Practices of Teaching Reading by English Teachers in the Junior High Schools of Independent School District No. 1, Tulsa County, Oklahoma. Thesis, University of Tulsa, 1972, 109p. [ED 065 858]

This study surveyed the practices of teaching reading by English teachers in the twenty-one Tulsa public junior high schools by means of a 49-item questionnaire distributed to all teachers whose major assignment was English. Questions covered eight aspects of reading instruction: (1) diagnosis of reading ability; (2) provisions for helping retarded readers; (3) development of vocabulary; (4) materials for reading; (5) promotion of interest and taste in reading; (6) instruction for reading nonliterary material; (7) instruction for reading literature; and (8) development of oral reading, speed skills, and creative activities based on reading. Analysis of the results showed that the English teachers were teaching reading to some extent, and generally followed prescribed methods of so doing. However, systematic and deliberate teaching of reading was not practiced in most of the respondents' classrooms, nor did the teachers see reading in the broad communication sense needed to promote necessary growth in all reading skills. The questionnaire and the percentage of respondents for each item choice are in the appendix.

1421. Barton, Thomas L.; Beachner, Anna M. Teaching English in the Two-Year College. Menlo Park, Calif.: Cummings Publishing Co., 1970, 133p. [ED 045 665. Document not available from EDRS. Available from Cummings Publishing Co., 2727 Sand Hill Road, Menlo Park, Calif. 94025 ($3.95 paperbound)

Of special use to departments in four-year colleges and universities which have responsibilities for preparing teachers of English and for developing in-service projects for two-year college personnel, this book details instructional techniques and curricular materials for the community college teacher of English, and for those in preparation for such assignments. New teacher-learner roles, unconventional approaches to language learning, and divergent points of view toward traditional course content are topics included. Also provided are materials on evaluation of student progress, descriptions of special facilities such as learning laboratories, descriptions for organizing course content and placing students in appropriate programs, and new ways for involving staff in identifying and meeting varied student needs and interests. In the chapters, spanning such areas as written expression, improvement of reading, and elective offerings, there is both stated and implied identification of the contribution to be made by important supportive personnel, i.e., counselors, librarians, and learning specialists.

1422. Donelson, Kenneth L. The 'New' Literature? Arizona English Bulletin 13 (October, 1970): 8-13 [ED 045 674]

The "new" teaching of literature which is enjoyable and relevant to the lives of students, and which reflects the excitement of the teacher, should (1) make less use of anthologies, more use of paperbacks; (2) involve less common reading, more individualized reading; (3) use less adult literature, more good adolescent literature; (4) consist of less teaching about literature, more teaching of literature; (5) concentrate less on classical, antiseptic literature, more on modern--especially ethnic--literature; and (6) include the teaching of films as art forms.

1423. Emans, Robert. The Effectiveness of Emphasizing Reading Skills in an English Course for Underachievers. Chicago: University of Chicago, 1966, 77p. [ED 010 606]

Specially adjusted English courses for underachieving students in grades 10 through 12 were specifically designed to emphasize reading skills. A fifteen-student sample was divided into one experimental and two control groups, and was matched on IQ, reading achievement, and grammar. The data were gathered over a period of one academic year, and the following hypotheses were tested: (1) emphasis on reading will be related to greater achievement in reading skills; (2) consequent reduction of grammar and essay writing for the sample group will not significantly impede achievement in these areas when compared with the control groups; and (3) students taking a course adjusted to their needs will express more positive attitudes toward learning than those students in unadjusted courses. After comparing the posttests to the pretests, it was found that the experimental group made substantial gains in reading skills, and the two control groups also made gains but in smaller amounts. None of the groups made gains in comprehension. There was no significant difference among the three groups in both grammar and essay writing, even though the experimental group received no instruction in this area. The experimental group's attitude toward learning was not improved, and in effect became hostile. The suggestion was made that, if some meaningful demonstration of the real progress made by the experimental group could be effected, the group would not feel singled out as "dumb" and would possibly evince a more positive attitude toward learning. It was concluded that such a specially designed English course which does not single out the underachiever as being different or unusual could be successfully implemented.

1424. Evertts, Eldonna L., ed. English and Reading in a Changing World. Urbana, Ill.: National Council of Teachers of English, 1972, 178p. [ED 062 336. Document not available from EDRS. Available from the National Council of Teachers of English (Stock No. 01624: $3.25 non-members, (2.95 members)]

A set of articles presenting a broad base for displaying the thinking of outstanding researchers and scholars on the subjects of English and reading is given. These articles were drawn from papers read at a series of institutes cosponsored by the University of Illinois and the National Council of Teachers of English. Each paper reflects elements

of change in curriculum development and in the teaching of English. The articles are divided into four sections. Articles in the first group express the convictions underlying current efforts to center the teaching of English on individual creativity. The second section consists of articles which focus on changes which have occurred in recent years in the approaches to the teaching of the various aspects of English. The articles in group three are a number of surveys of current practices in the area of children's literature, reading at the elementary and secondary levels, composition at the elementary level, and a case study on curriculum planning. The last group of articles deals with the role of the teacher.

1425. Folkemer, Paul. Teaching English and Reading Simultaneously for Eleventh Grade Non-Regent English. Spring Valley, N.Y.: Ramapo Central School District 2, 1966, 71p. [ED 021 689]

The need for simultaneous teaching of reading skills and course content prompted the formation of a study guide which coordinates these two areas in an eleventh-grade non-regent English program used by Ramapo Central School District No. 2. The guide provides exercises with a range of ability and achievement levels which adjust to individual student differences. It contains five literary units--the short story, the novel, nonfiction, drama, and biography--and a unit on the complete sentence. Each lesson is divided into five sections: (1) readiness, (2) purpose for silent reading, (3) oral reading and discussion, (4) word attack and word recognition skills, and (5) followup exercises. Study guide questions and word attack exercises are provided at the end of the lesson; an answer sheet is provided for the teacher.

1426. Kinkead, Thomas; Levine, Milton. Teaching Literature and Reading Simultaneously, Ninth-Grade English. Spring Valley, N.Y.: Ramapo Central School District 2, 1964, 56p. [ED 020 075]

Specific study materials and a guide for teaching reading comprehension and literature are presented. The study materials provide for a wide range of ability and achievement, and are applied to the titles regularly used in the ninth-grade literature program of the Ramapo Central School District. Excerpts from "The Thread that Runs so True," "Romeo and Juliet," and "The Odyssey," and "Great Expectations," are found in the literature anthology, "Adventures in Reading." Attention is given to reading for details, main idea placement, vocabulary, word and phrase meaning, relationships, cause and effect, sequence of events, predicting outcomes, reading for inference, identification of foreshadowing, plot structure, tools of the poet, characterization, character analysis, and character development in the various exercises included. An answer key is provided, although the authors caution that there are few absolute answers for exercises designed to stimulate exploration and discussion.

1427. McGuire, George K. The Teaching of Reading by English Teachers in Public High Schools: A National Survey. Interim Report. Urbana, Ill.: Illinois State-Wide Curriculum Study Center in the Preparation of Secondary English Teachers (ISCPET), 1969, 96p. [ED 031 498]

Focusing on the teaching of reading, this USOE-sponsored study investigated the educational preparation, teaching practices, and personal attitudes of English teachers in public high schools throughout the United States. Questionnaires were mailed to 2004 randomly selected secondary school members of the National Council of Teachers of English. Results from a 60 percent response indicated that (1) a large majority of teachers in the sample felt a need for teaching reading in high school and accepted this responsibility, (2) most teachers who gave reading instruction felt inadequately prepared to teach reading, (3) teachers' preparation for teaching reading has not significantly improved in recent years, and (4) better-prepared teachers used more recommended reading practices, and noted their own effectiveness in teaching reading more favorably than did those less well-prepared.

1428. Ross, Ramon Royal. Reading Skills and the High School English Program. Speech given at the Annual Convention of the National Council of Teachers of English, Atlanta, November, 1970, 11p. [ED 051 230]

It is questioned whether high school students need to be taught the reading skills that have been identified to be taught in high school. One study shows college students to be antagonistic toward the work they were doing, and this resulted in little or no skill acquirement. Yet, evidence shows that all high school students don't read with proficiency. Students should acquire reading skills through self-paced instruction, working only with those skills lacking. Packaged learning materials are useful for this purpose. A student is pretested until skills needed are identified. He then selects from suggested materials and activities in a learning package those which fit his unique style of learning. Behavioral objectives guide him as he learns. When he has achieved all the objectives in the package, he may proceed to the next skill. Reading skills necessary for high school students include decoding, interpreting, and applying. For best possible results, teachers should teach indirectly. Students report liking school better when the teacher accepts student responses, asks questions, and is encouraging. In short, a curriculum change is needed in high school reading programs.

Content Math

1429. Corle, Clyde G.; Coulter, Myron L. The Reading-Arithmetic-Skills Program, A Research Project in Reading and Arithmetic. University Park, Pa.: Pennsylvania School Study Council, 1964, 60p. [ED 010 989]

An investigation was made to determine whether students who received specific assistance with reading skills in arithmetic showed superior achievement in their reading and arithmetic when compared with a similar group who did not receive such assistance. Fifteen schools were selected from approximately seventy member school districts of the Pennsylvania school study council. Two fourth-, fifth-, and sixth-grade classes were selected from each school. One class served as the experimental group and the other as the control. Data for each of the experimental and control groups are included. Alternate forms of the California Reading Test, the California Arithmetic Test, and the RASP test developed by the investigators were administered as pre- and post-tests in ten reading competencies believed to be necessary for solving verbal arithmetic problems. Classroom teachers were given direction for the instructional periods. Mean gains, correlations, factor analysis, and eigenvalue were used to analuze the data. On each achievement test, the mean gain in scores from pre- to post-test was greater for the experimental groups. Correlations between subtests were positive. The size of the correlation increased at each grade level. A general factor accounted for 72 percent of the variance. Conclusions, recommendations, and implications are presented. A bibliography and tables are included.

1430. Developmental Skill and Achievement Differences of Children Identified as Excellent, Good, and Average in Reading and Arithmetic. Study Number Three. University City, Mo.: University City School District, 1970, 23p. [ED 044 181]

This study, sponsored by the USOE Bureau of Research, sought to identify: (1) specific developmental skills or patterns of skills which contributed significantly to success and nonsuccess in reading and arithmetic, and (2) relationships of excellent, good, and average achievers in reading, and arithmetic to success in other aspects of achievement. A complete assessment battery (IIPA, PPVT, and tests of auditory discrimination, visual-motor integration and motor coordination) was given individually to 103 boys and girls before they entered kindergarten. The children were identified as excellent, good, or average achievers by a tabulation of grade equivalent scores on the Stanford Achievement Test given at the end of the first primary year. Analysis indicates that ITPA-3, which measures ability to complete verbal analogies, differentiates between achievers in eleven of twelve comparisons. There appears to be a threshold in certain reading and arithmetic skills which separates the excellent and good achievers from the average, and for which sex differences are shown. More developmental skills tests differentiated the three groups of achievers in arithmetic than in reading and differentiated among boys more than girls. Girls who rated average in one aspect of achievement tended to maintain an average level in other aspects of achievement.

1431. Earp, N. Wesley. Reading in Mathematics. Paper presented at the International Reading Association Conference, Kansas City, Mo., April 30-May 3, 1969, 24p. [ED 036 397]

In a synthesis of literature on reading in mathematics, it was noted that there is a broad basis of research in this area on which to base instruction on definite reading skills important in arithmetic achievement. It was stressed that the vocabulary of arithmetic texts runs at readability levels higher than the performance levels of students in the grades in which the books are used, and that the vocabulary of arithmetic texts does not greatly parallel or overlap that of reading texts. Thus children must be taught special word attack skills and vocabulary for arithmetic comprehension. They must recognize that verbal arithmetical material is conceptually packed with a high density factor which requires at least three kinds of reading adjustment: adjustment to a slower rate than that used for narrative materials, varied eye movement including types of regressive eye movements, and intentional rereading. Two or three sets of symbolic meaning may be involved within one context; thus a student's vocabulary must include technical words, signs, and symbols. All of this requires an attitude of aggressiveness and thoroughness. The student must read to grasp the total idea and the sequence and relationship of ideas. Specific attack steps, tables, and a bibliography are included.

1432. Harvin, Virginia R.; Gilchrist, Mary A. Mathematics Teacher--A Reading Teacher? South Bend: Indiana University, School of Education, 1970, 11p. [ED 041 702]

The extent of any relationship of problem solving in mathematics to reading was investigated. A review of similar research studies indicated a need for further research because of the lack of agreement among authorities concerning this relationship. Two contrasting populations of third-grade students were selected for the study. One group was from a city school in a large metropolitan area in western New York. The second was from a village school in a farming community in northern Indiana. All were from upper-lower and lower-middle class backgrounds. The children were given reading and arithmetic tests, and the correlation coefficients were computed. In each instance, the total reading and problem-solving achievement scores were converted to percentile ranks. A positive relationship between problem solving in arithmetic and reading was found for both groups, but it was not judged to be of sufficient magnitude to be an accurate predictor of performance of one variable from the other. It was, however, concluded that the arithmetic teacher must teach certain reading skills. Tables and references are included.

1433. Henney, Maribeth. Improving Mathematics Verbal Problem Solving Ability Through Reading Instruction. Paper presented at the International Reading Association Conference, Anaheim, Calif., May 6-9, 1970, 27p. [ED 044 243]

The effect of special instruction in certain reading skills involved in solving verbal problems was compared with the effect of supervised practice in solving verbal problems on the improvement of verbal problem-solving ability of 179 fourth-graders. The sample from six classes in three public elementary schools in Cuyahoga Falls, Ohio, was divided into two groups. The special instruction treatment group received eighteen lessons of instruction in reading verbal problems, and the supervised study group solved verbal problems using whatever method they wished. Children in both groups improved significantly from pretest to posttest on the investigator-designed verbal problems test. However, neither group resulted in significantly higher mean scores on the posttest. The firls in the special instruction group made significantly higher mean scores on the reading subtest of the posttest than did the boys in that group. No other significant differences were found between treatments, between sexes within treatments, or between sexes differentiated by treatments. The Stanford Achievement Test reading and mathematics subtests were also administered. Neither specific reading abilities, general reading abilities, nor computational abilities were found to be more highly correlated with verbal problem solving. References, tables, sample test items, and worksheets are included.

1434. Improving Reading-Study Skills in Mathematics K-6. New York State Education Department, Albany: Bureau of Elementary Curriculum Development, 1972, 32p. [ED 067 257]

Presented is the basis for an integrated approach to teaching reading skills and mathematics concepts at the elementary school level. A general explanation of concept formation, of oral and written language, and of mathematics symbols, with specific suggestions as to their application in mathematics, is included in the first section of the pamphlet. The second section deals with the specialized skills needed for reading and thinking in mathematics. These skills include decoding words and math symbols, understanding the processes of mathematics, and applying the decoding and comprehension skills to problem solving. A list of eight suggestions and two references are given to help the teacher and students in developing their mathematics vocabulary. Reading comprehension skills are detailed, with activities specified for helping students with story problems, graphs, and charts. The final section deals with the role of the teacher as one of management and includes a discussion of objectives, evaluation, diagnosis, and organization of materials and experiences.

1435. Rosenthal, Daniel J. A.; Resnick, Lauren B. The Sequence of Information in Arithmetic Word Problems. Paper presented at the meeting of the American Educational Research Association, New York, February 4-7, 1971, 7p. [ED 049 909]

The effects of three variables on the difficulty of verbal arithmetic problems were examined. Variables included problem form, sequence of information, and problem verb. A total of thirty-two problems was generated, four in each of four problem forms and two sequences of information. Vocabulary words were not above second-grade level, and numbers used

ranged from 2 through 9 with no borrowing or carrying required. Two groups of elementary-grade subjects (63 in all) solved all of the problems. Analysis of variance performed on the date indicated that problem form, sequence of information, and their interaction were significant (P. was less than 001), but that the problem verb was not. Reverse sequence problems were most difficult to solve and became more difficult as the problem form became more difficult. It was concluded that subjects need to distinguish sequence of information from sequence of events where these do not coincide and that reverse sequence causes the greatest difficulty in problem solving. Tables and references are included.

1436. Rudolph, William B.; Kane, Robert B. Estimates of the Relative Sequential Constraint for Selected Passages from Mathematics Books and the Relationship of These Measures to Reading Comprehension. Paper presented at the Conference of the American Educational Research Association, Minneapolis, Minn., March 2-6, 1970, 31p. [ED 044 237]

Since mathematical English (ME) differs from ordinary English (OE) in the number of symbols used, this research investigated sequential constraint (constraints on symbol choice attributed to preceding textual material) of excerpts from eighteen mathematics books, both traditional and modern, to determine its relationship to readability. Findings indicated the following: (1) the length of the total passage must be considered; (2) sequential constraint did not differ for modern and traditional mathematics books; (3) sequential constraint varied between topics, which implies that no value of sequential constraint can be assigned to ME; (4) an inverse relationship existed between sequential constraint and grade level; (5) there was more constraint in the deductive style of writing; and (6) there was an inverse relationship between sequential constraint and reading comprehension of ME. Implications for teaching would place greater emphasis on topics having high constraint since such topics were associated with lower reading scores, and topics having low constraint might be developed in greater depth since they were associated with higher reading comprehension scores. Included are a bibliography, a list of definitions of technical terms and tables.

1437. Shaw, Judith A. Reading Problems in Mathematics Texts. 1967, 19p. [ED 016 587]

California state-adopted mathematics textbooks for grades 1 through 8 were analyzed to determine the readability levels, the amount of expository and story-problem reading required, and the frequency of mathematics vocabulary used. Readability was determined through the Dale-Chall formula and the findings of an earlier study using Spache's formula. Chapters randomly chosen from the intermediate and junior high textbooks and all the primary textbooks were studied to investigate the amount of reading required. Word lists were constructed for each level and compared with Thorndike's word list for vocabulary load. Results indicate that there was a wide range of readability levels

within each textbook. Only the fourth- fifth- and sixth-grade textbooks fell within the intended range. The intermediate and junior high textbooks required a considerable amount of expository and story-problem reading, but there was no orderly progression in the amount of reading required. There was a significant gap between the third and fourth grades. The vocabulary load was the lowest at the primary level and the greatest at the junior high level, with a gradual increase at the intermediate level. Tabulated results accompany the findings, and an extensive bibliography is provided.

1438. Taschow, Horst G. Reading in Mathematics. Regina: Saskatchewan University, 1970, 13p. [ED 046 670]

Difficulties inherent in the reading of mathematics at secondary and college levels are discussed. Special emphasis placed on the reading of arithmetic numerals, literal numbers, operational symbols, and expressions of relationships, as well as the reading of technical vocabularies and specialized meanings of general words. While each mathematical field has its own symbolization and terminology or shares those with others, they may already be or may become at the same time obstacles toward efficient reading in that content field. To seek remediation and, ultimately, prevention of mathematical reading inefficiencies, a group informal reading inventory, a visual-auditory-kinesthetic-tactile approach, and a directed reading activity (DRA) are recommended. In addition, a complete DRA lesson (including readiness, guided silent reading, questions, oral rereading, and application) featuring a specific algebraic problem is presented in order to demonstrate its use in a classroom setting. References are given.

Content Science

1439. Adams, W. Royce; Hurd, Paul Dehart. How to Read the Sciences. A Dynamic Approach to College Reading. Palo Alto, Calif.: Educational Development Corp., 1970, 269p. [ED 043 493. Not available from EDRS. Available from Scott, Foresman and Co., 1900 East Lake Avenue, Glenview, Ill. 60025 ($3.00)]

This text is designed to develop flexibility of reading techniques in college science students. Four basic steps useful in reading science textbooks and research reports are described and illustrated by using extracts from current college science textbooks. Each of the steps (exploration of document, vocabulary check, analysis for comprehension, and synthesis for understanding) is treated separately, but practice extracts, with questions, are provided. Six patterns of scientific writing (classification, process-description, factual statement, problem-solving, experiment-instructions, and combinations of the preceding five) are recognized and exemplified in the analysis section where appropriate techniques for use with each pattern are given. Advice on techniques for building a vocabulary, taking notes, using outside reading sources, and taking tests is given.

1440. Friedman, Robert M. The Relationship Between the Retention Level of Orally and Visually Presented Science Material to Selected Fifth Grade Students. New York University, N.Y., 1968, 128p. [ED 045 360. Not available from EDRS. Available from University Microfilms (Order No. 70-762)]

Two groups of fifth-grade pupils were equated on reading ability, I.Q., science ability, hearing, and eyesight. The groups selected were well above average in IQ and reading ability. Four selections, each of 400 to 500 words, from standard fifth-grade elementary science texts were presented by allowing students to read them or by reading them to the students. Group A read selections one and two, and heard selections three and four, while group B heard selections one and two, and read selections three and four. Retention of the material was measured by a fifteen-item multiple-choice test for each selection. The five items on each test requiring inference from the information was less satisfactorily answered than the ten requiring recall or facts. There was no difference in mean score between the presentation methods and either group of questions.

1441. Herber, Harold L. Teaching Reading through Seventh Grade Science Content. Nassau County, N.Y.: Seqanhaka Central High School District Number 2, 30p. [ED 023 564]

The effectiveness of teaching specific, related reading skills without a content subject was tested in seventh-grade science classes. Comparisons were made among seventh graders who were taught no reading skills in conjunction with a content subject, seventh graders who received instruction in reading skills within the science content. The achievement of the three groups was compared according to performance on the Iowa Silent Reading Test, the New York State Science Survey, and the New York State Social Studies Survey. Samples were drawn from the total population of approximately 2,000 students and evaluated for reliability. The level of significant achievement gain between pretest and posttest scores was determined, and the amount of growth from group to group was evaluated. Results indicated that the reading, science, and social studies instructional programs produced significant gains regardless of the developmental reading program, but growth in subject content achievement was measurably affected by this reading instruction. Teacher experience in reading skills instruction may have been a factor. An appendix gives detailed, independent corroboration of the data processing.

1442. Kromhout, O. M.; and others. Conference on Computers in Undergraduate Science Education: A Computer-Assisted and Managed Course in Physical Sciences. Tallahassee: Florida State University, Computer-Assisted Instruction Center, October 30, 1970, 21p. [ED 046 240. Not available from EDRS. Available from National Technical Information Service, Springfield, Va. 22151 (AD-714 503]

An autonomous multimedia computer-assisted instruction (CAI) general-education physics course was developed and evaluated at Florida State University (FSU). Based on a one-term conventional lecture course which had been given successfuly at FSU for several years, the CAI course made use of an IBM 1500 instructional system to guide the student through a self-paced program of textbook reading assignments, audiotaped lectures, movies, and cartridged films of demonstration experiments. The student had to pass a diagnostic quiz administered by the computer on the reading assignment before beginning each lesson. At the end of each unit, he was questioned by the computer on the main points of the lesson before proceeding to the next unit. Review lessons on an IBM computer system were provided as a supplement to both the CAI course and the conventional course. The CAI course was given for credit to 23 students in the fall of 1967, and to 37 students in the spring of 1968 with satisfactory results, which gave some evidence that increasing involvement with CAI produces better grades. Recent tutorial approaches have also been made at FSU to simulating physics laboratory instruction. It is concluded that computer-managed instruction with CAI provides for a very cost-effective approach. This study was sponsored by the U.S. Office of Naval Research.

1443. MacDougall, Mary Ann. Methods of Presenting Programed Science Materials to Fourth Grade Pupils of Varying Ability and Achievement, Final Report. Charlottesville: University of Virginia, 1970, 117p. [ED 041 764]

The research reported in this project, which was sponsored by the USOE Bureau of Research, focuses on the effective development, evaluation, and individualization of programed materials. The study involved three phases. Phase one was to determine which of four programing methods was most effective for the attainment of science achievement at three levels: knowledge, application, and relationship. Subjects were fourth- and fifth-grade students randomly assigned to the four treatments. Results indicated that the developmental presentations, Skinnerian and Ruleg, were more effective at the three achievement levels than the textual presentations. In the second phase of the study, a flexible multivariable computerized approach was developed to (1) determine the readability and (2) guide in the writing and revision of self-instructional materials. The definition and evaluation of three remedial branching conditions derived from the automated readability model was the focus of the third phase. Forty-three fourth-grade students were randomly assigned to the three treatments. A multi-variate analysis was used to evaluate the three treatments. Levels of achievement, error rate, time, intelligence, sex and experimental treatments were defined as predictor variables. Science achievement, at three conceptual levels, was defined as the criterion. The report also contains a reference section, a bibliography, and an appendix of data tables.

1444. Mallinson, George G. Teaching the Essential Reading Skills in Science Paper presented at the International Reading Association Conference, Seattle, May 4-6, 1967, 15p. [ED 014 380]

The current debate over the reading skills necessary for science learning is discussed. In the past, the teaching of reading was based on these two major considerations--the recognition of meanings of individual words and the organization of the word stimuli received from the printed page into meaningful patterns. The resurgence of the investigation of the theory and principles of learning is characterized. Some current problems are that research in perception relating to reading has not dealt adequately with the information explosion, with the population size and type, or with problems arising from modern communication. Current assumptions for teaching arising from prior research are presented. Predictions concerning the role of the book and of electronics technology and suggestions for research and study are outlined.

1445. Smith, Carl Bernard. Tadpoles Make the Nicest Frogs (Reading Science Selections). Paper presented at the Language Arts and Reading Conference, Ball State University, June 22-23, 1970, 10p. [ED 044 254]

Means of aiding children when they are reading in a content field were suggested. The author pointed out that there are various structural or organizational patterns in different kinds of texts, and if students were made aware of these patterns they would have a way of preorganizing themselves to increase comprehension. The specialized content vocabulary and such text-accompanying materials as diagrams and charts were also mentioned as areas in which teachers should take special notice and concentrate their instruction. Seven musts were offered for teachers to keep in mind if they are going to diagnose and adjust to individual learning needs in reading science materials.

1446. Vitrogan, David. A Science Skills Center Approach to Develop Functional Literacy among Socially Disadvantaged Youth, An NDEA Sponsored Laboratory Demonstration Project. Paper presented at the Annual Meeting of the National Association for Research in Science Teaching, Minneapolis, Minn., March 5-8, 1970, 19p. [ED 043 481]

A science skills center was designed and operated as part of an NDEA summer institute for teachers in grades 6-9, in which forty teachers participated. These teachers were provided with the opportunity to participate in demonstration centers working with some ninety children, whose reading scores ranged from 3.0 to 8.5, and who ranged in age from eleven to fourteen. Thirty of the children worked in the science skills center. These children also worked in reading skill centers, which were designed as learning laboratories where children work individually or in small groups, interacting with self-directing materials which were matched to diagnosed needs. The science skills centers provided learning experiences which integrated reading with highly motivating science experiences. The science experiments provided the children with a concrete meaning for words and provided the opportunity to learn science concepts and processes. The children responded enthusiastically to the various tasks in which they were involved. Reading gains of approximately one-half of a grade were obtained.

1447. Fay, Leo. Reading and Spelling: How Are They Related? Number 1. Washington, D.C.: National Reading Center Foundation, 1971, 6p. [ED 059 009. Also available from National Reading Center, 1776 Massachusetts Ave., N.W., Washington, D.C. 20036 (free)]

Relationships between spelling and reading have been found such that poor readers are often poor spellers, but good readers may or may not be poor spellers. Part of the reason for the seeming contradiction may be that spelling requires precise knowledge of individual letter combinations, whereas often as much meaning in reading can be obtained from context as from the makeup of individual words. Spelling is made more difficult by the inconsistencies of English pronunciation, by the discrepancies in numbers of letters and combinations of letters used to represent English sounds. Teachers and parents can be aware of several common types of spelling errors so that these can be corrected early in the learning of words. Good spelling habits are invaluable in learning to read. This brochure is one of a series commissioned by the National Reading Center to help inform all citizens about reading issues and to promote functional literacy. References are included.

1448. Guidelines for Communication Arts: K-12. Cleveland, Ohio: Board of Catholic Education, 1971, 243p. [ED 059 186. HC not available from EDRS. Available from Board of Catholic Education, Diocese of Cleveland, 5103 Superior Avenue, Cleveland, Ohio 44103 ($9.50)]

These guidelines are part of a total curricular program K-12 developed for use in the elementary and secondary schools of the Diocese of Cleveland. Objectives for the study of the communication arts in these grades are listed as follows: (1) listening with attention, discrimination, and empathy, (2) viewing with perception, discrimination, and appreciation, (3) thinking clearly, critically, and creatively, (4) reading with comprehension, discernment, and for enjoyment, and (5) speaking and writing with clarity and precision, thoughtfully and effectively, and with honesty and conviction. A section on teacher resources for these grades is included.

1449. Houghton, Judy H. Reading the Newspaper: Language Arts. Miami, Fla.: Dade County Public Schools, 1971, 18p. [ED 062 335]

This course, an authorized course of instruction for the Quinmester program, is designed for the reading and understanding of the newspaper. Included in the content are a study of the structure of the newspaper, styles of writing found in newspapers, a detailed study of a story as it unfolds, and writing assignments using different styles of writing. Objectives include the following: (1) the student will recognize the need for newspapers in society; (2) the student will examine the contents of a newspaper; (3) the student will identify news and news style; (4) the student will investigage new interpretation; (5) the student will discern elements of distortion and bias in the news; and (6) the student will evaluate the quality of various newspapers.

1450. Painter, Helen W. Poetry and Children. Newark, Del.: International Reading Association, 1970, 94p. [ED 046 651. Document not available from EDRS. Available from International Reading Association, ($3.00 members, $4.00 nonmembers)]

Because teachers often feel incompetent when it comes to teaching poetry, many children grow up without ever acquiring an appreciation for the words and thoughts of poets. This book, intended for teachers, contains a lucid explanation of what poetry is, bringing together several classic definitions by eminent poets and critics. Elements that make a poem a literary work are pointed out, and some of the best poems for children are used as examples. Another useful feature of this book is the clear explanation of some of the technical aspects of poetry, which can provide teachers with a quick review of literary terms and a valuable format for future reference. Realistic teaching suggestions which recognize the contemporary interest of children are given. Selected references in books, bulletins, and periodicals and a bibliography of additional selected poetry are included.

1451. Reading in the Language Arts, K-12. Oklahoma State Department of Education, 1969, 85p. [ED 041 700]

A guide for improvement of the developmental reading program, this publication was prepared by the State Reading Committee of the Oklahoma Curriculum Improvement Commission. The scope is kindergarten through grade 12. The first chapter deals with the philosophy, objectives, and characteristics of a developmental reading program. The concept of readiness and suggested readiness activities are discussed in chapter two. Chapter three details the components of the developmental reading program under three broad headings: (1) basic skills in reading, (2) reading in the content areas, and (3) interests and tastes. The concluding chapter lists fifty-two annotations of reading readiness, diagnostic, and reading aptitude tests.

1452. A Reading Skills Guide for Use in the Content Areas at the Junior and Senior High School Level. Redwood City, Calif.: San Mateo County Board of Education; San Jose, Calif.: Santa Clara County Office of Education, 1971, 193p. [ED 067 639. Document not available from EDRS. Available from Santa Clara County Office of Education. Publications Department, 45 Santa Teresa Street, San Jose, Calif. 95110 ($2.00)]

This guide, designed for use by content area teachers at the junior and senior high school level in their work with students who have minor reading difficulties, contains a number of assessment techniques as well as a variety of approaches and suggestions for teaching. Included are: study guides that are developed around a topic for a specific content area and that are complete in themselves and ready for the teacher to use whenever appropriate; teaching ideas for increasing students' comprehension of content materials; and study skill materials and techniques of classroom instruction that apply to many content areas. Suggestions for individualizing reading assignments, a listing and description of available standardized tests, and a partial list of high-interest, easy-to-read paperbacks for secondary students are included. (See ED 067 637 and ED 067 638 for companion guides.)

Comparison

1453. Olson, Arthur V. An Analysis of Sixth Grade Pupils' Ability to Use Context Clues in Science and Social Studies. Paper presented at the Annual Meeting of the International Reading Association, Atlantic City, N.J., April 19-23, 1971, 17p. [ED 050 914]

The ability of sixth-grade students to use context clues for identifying unknown words in science and social studies reading materials, and the types of context clues most frequently used, are examined. The thirty subjects from three white, middle-class urban schools missed 50 percent or more of the words on a prevocabulary test. The subjects read two articles in the Reader's Digest Reading Skill Builder and then selected the correct meanings of 75 words taken from the articles. The vocabulary-context aid test was used to determine how well the subjects used six types of context clues (different explanation, experience or familiar expression, comparison and contrast, synonym, summary, and reflection of mood or situation). Results of the study showed that (1) 13.3 percent of the subjects correctly identified 75 percent or more of the words, (2) 96.7 percent identified at least 50 percent of the words, (3) all subjects correctly identified at least 40 percent of the words, (4) experience or familiar expression was the context clue used most frequently, (5) summary was the context clue used least frequently, and (6) 32 percent of the subjects used the clues that the examiners had expected them to use. Tables and references are included.

1454. Stauffer, Russell G. A Vocabulary Study Comparing Reading, Arithmetic, Health and Science Texts. The Reading Teacher 20 (November 1966). [ED 013 748. Document not available from EDRS]

Word counts were made to compare the vocabularies in reading, health, science, and arithmetic textbooks for grades one to three. Counts were made in seven different basic reading series and in three different series in each of the three content areas. The limitations of the word counts are specified. Frequency of occurrence was used to analyze the data. The seven reading series introduced about twice as many new words at the third-grade level as did the three science series. Of the 570 new words presented in the first-grade reading series, 117 words were common to all series. The words used in different reading series varied more at the higher grade levels. Only eleven words were common to the reading and arithmetic series at the first grade level. Other results, conclusions, and one reference is included.

Research

1455. Anthony, Homer Bruce. A Conceptual Model for the Improvement of Reading Instruction in the Content Areas in Secondary Schools. Ph.D Dissertation Arizona State University, 1972, 229p. [ED 071 023. Document not available from EDRS. Available from University Microfilms, A Xerox Company,

Dissertation Copies. Post Office Box 1764, Ann Arbor, Mich. 48106 (Order No. 72-23, 151, MF $4.00, Xerography $10.00)]

The purpose of this study was to develop a conceptual model which may be used by administrators and teachers to implement a program designed to improve reading instruction in the content areas in secondary schools. Nine goals were extracted and one goal was extrapolated from the literature, and placed in an open-ended opinionnaire. Principals, teachers of reading, and content area teachers from 74 Arizona secondary schools were asked to express agreement or disagreement with the validity of the goals and to identify those forces they felt were helping or hindering the attainment of the goals: nine of the ten goals were considered valid by 27 principals, 34 reading teachers, and 283 content teachers from fourteen content areas. The conceptual model was constructed from a synthesis of the goals with the data. The results included implications for the following areas: (1) setting of reading proficiency levels, (2) university preservice instruction, (3) student involvement in curriculum decisions, (4) contributions of content area teachers to reading instruction, (5) assessing educational priorities at the secondary level, and (6) decision-making structures within the local school.

1456. Artley, A. Sterl. Secondary Developmental Reading Programs--Are They Feasible? Paper presented at the Annual Meeting of the International Reading Association, Atlantic City, N.J., April 19-23, 1971, 16p. [ED 053 871]

The feasibility of and disparity between pronouncement and actual practice in secondary school developmental programs are discussed. The author states that, while systematic development of reading competencies and interests are the purported goals, the actual status of developmental reading varies greatly as reported in various studies. Smith (1963) found that by applying criteria of comprehensiveness and quality of 114 schools, seven were found to have good programs. In California (Graham, 1969), 82 percent of the reading programs were remedial. In New Mexico (Bowren, 1970), the programs were remedial and isolated from the rest of the school. In general, trends indicate that (1) the English teachers handle reading classes, (2) programs are in the experimental stage, (3) most are short-term reading and study classes taught in conjunction with content classes (usually English), and (4) only a few offer separate reading classes and free or sustained reading. Problems were listed which limit developmental programs, and it was concluded that teaching of reading and study skills in content classes, widening of scope to include developmental reading, improving program direction, and providing trained personnel will all help make a secondary developmental reading program feasible and effective. References are included.

1457. Bahe, Virginia R. A Content Analysis of Current College Reading Manuals. Paper presented at the National Reading Conference, Atlanta, Georgia, December 4-6, 1969, 25p. [ED 036 408. Document not available from EDRS. Available from National Reading Conference, Appalachian State University]

The subskills content of twenty-three college reading manuals published in the past decade was analyzed. The skills which were investigated were grouped under these headings: rate, vocabulary, comprehension, organizational skills, critical reading, and study-textbook reading skills. In addition, content

features such as tests, exercises, test validations, level notations, and progress charts were tabulated. It was concluded that no single gook is adequate for the diverse instructional and practice needs in the typical college reading class. A multititled collection, cross-referenced by subskills, was recommended for an effective, relatively inexpensive comprehensive program of individualized instruction. A 135-item bibliography with cross references for 53 dilineated areas related to reading, writing, and study skills improvement which was developed at the University of Wisconsin-Milwaukee Reading-Study Skills Center is included.

1458. Cortright, Henrietta H.; and others. Basic Speech in the Senior High School. Michigan Speech Association Curriculum Guide Series, No. 2. Skokie, Ill.: National Textbook Corp., 1968, 41p. [ED 026 390. Document not available from EDRS. Available from National Textbook Corp. (Code No. 5-005-4, $1.65)]

This guide for a basic high school speech course is intended to develop the student's sense of responsibility for words and actions, his skills in the use of the voice and bodily actions, his poise and self-confidence, and his appreciation and understanding of other people's ideas. The nine units included in the guide are concerned with listening, everyday speech, thinking, gestures, articulation, individual speeches, oral interpretation, discussion, and parliamentary procedure. Each unit contains a statement of lesson objectives, an outline of the lesson content, suggested learning experiences, a bibliography, and a list of audiovisual materials.

1459. Courtney, Brother Leonard. Are We Really Improving Reading in the Content Field? Paper presented at International Reading Association Conference, Boston, April 24-27, 1968, 19p. [ED 022 651]

Studies representative of research in content area reading provide extensive but inconclusive evidence of the extent and effectiveness of reading in the content areas. Some of the studies reviewed in this paper illustrate gains made through special instruction in reading in the content areas. They point up the need to integrate reading instruction with subject matter, and suggest that the content-area teachers are best equipped to teach the reading and study skills needed in their respective content areas. The other studies cited are attempts to examine the relationship between general and special reading abilities, the readability of instructional material used in the content areas, and the efforts made in the language arts to improve content area reading. There is need for better research in teacher training, in relating subject matter objectives to reading objectives, in providing adequate materials, in grouping for instruction, in the assessment of outcomes, and in the development of guidelines for administration and supervision of content area reading programs. A list of references is included.

1460. Courtney, Brother Leonard. Meeting Special Reading Needs in the Content Area Classroom. Paper presented at the International Reading Association Conference, Kansas City, Mo., April 30-May 3, 1969, 13p. [ED 032 997]

Problems of teaching reading in content areas were investigated through interviews with reading teachers, content area teachers, and reading coordinators. Teachers were asked to react to a description of a hypothetical reading problem. Study of interview data showed that reading teachers generally were negative about the degree of concern for reading evidenced by content area teachers, and that content area teachers who were successful were concerned about the reading needs of their students and were endeavoring to deal with them. Conclusions from the interview study do not support those of earlier studies. According to interview results there do not seem to be unidentified reading problems in secondary content areas, nor does there seem to be a reaching out of reading teachers to content area teachers. It is suggested that the work which needs to be done is to bring these teachers together, since success depends on their cooperation.

1461. Courtney, Brother Leonard. The Rationale for Teaching Reading in the Content Fields. Paper presented at the Hofstra University Reading Conference, Hempstead, N.Y., October 30, 1970, 15p. [ED 046 642]

Four considerations in the teaching of reading in the content areas were discussed: (1) the state of teaching itself, of reading, and of the content areas; (2) the characteristics of today's student; (3) some basic assumptions and arguments for content-area reading; and (4) steps toward implementing a content-area reading program. The author makes the following statements: (1) Critics of education claim we are failing to reach the young because we are obsessed with content and methodology geared toward cognitive learning, whereas youth culture today is affective and totally alien to cognition. (2) The media to which youth are attuned involve light, color, sound, and movement with a deemphasis on reading. (3) To make reading relevant and necessary for youth, it must be taught as a means of achieving goals which are concerned with their attitudes and values. (4) The content-area teacher is in the most favorable position for teaching both content and process whereby the material is treated in depth and reading skills are applied immediately in context. (5) Through daily contact with students, assessment can be made on attitudes and values which can be incorporated into cognitive goals. References are included.

1462. Dailey, John T.; Neyman, Clinton A., Jr. Transportation Today and Tomorrow. Washington, D.C.: George Washington University, School of Education, 1966, 126p. [ED 017 702]

This reading text was developed in a curriculum project, described in ED 017 689, along with other materials to stimulate reading about mechanical and technological topics and to teach basic vocational talents. The organizing theme of the text is transportation and power. Major portions of the book are devoted to pictures and easy-reading descriptions of contemporary American and foreign cars, contemporary private and military aircraft, spacecraft and rockets, and nuclear submarines and ships. Emphasis is places on the mechanical specifications and features and the power source of each vehicle. Supplementary materials consist of four crossword puzzles built around names and ideas in the text. Other related doucments are ED 017 690 through ED 017 706.

1463. Daines, Delva. Developing Reading Study Skills in the Content Areas. Paper presented at the Meeting of the International Reading Association, Atlantic City, N.J., April 19-23, 1971, 12p. [ED 052 913]

Junior-high-school students need instruction in utilizing the various reading study skills as a means of better understanding content, and of becoming more independent learners of subject matter. Teachers in the content areas, by using texts and subject-related materials, are in the best position to teach these skills. Although each subject has its own study skills, there are six basic study skills that are most generally useful. First, instruction in ways of locating and using sources of information should be given. Second, students should learn flexibility in reading by developing the skills of skimming and scanning. A third important study still is the ability to select and evaluate ideas, which consists largely of identifying significant ideas and relevant details. Related to this skill is the ability to organize ideas by determining relationships among them. Outlining, notetaking, and summarizing are helpful ways of organizing ideas. A fifth skill that is of benefit to junior-high students is the ability to follow directions, beginning with very simple procedures and progressing to the complex. Finally, skill in using graphic and tabular aids can help in synthesizing facts and details into usable patterns. References are included.

1464. Derosier, Cynthia. You and Your Charge. A Brief Handbook for High School Tutors Working Under the Waianae Model Cities Tutorial Plan. April 1971, 13p. [ED 056 011]

This handbook is intended to provide some basic guidelines for the high school age tutor of young children. Areas discussed include the development of language in children, organization of teaching time, and use of instructional materials.

1465. Farley, Eugene J.; and others. High School Certification through G.E.D. Tests. New York: Holt, Rinehart and Winston, 1967, 255p. [ED 019 609 Document not available from EDRS. Available from Holt, Rinehart and Winston, Inc., 383 Madison Ave., New York, N.Y. 10017].

The first few chapters of this guide to high school certification through the General Educational Development (GED) tests explain the nature of an equivalency certificate and the steps needed to obtain it, how to perform effectively on the five GED tests, how to study, and how to use the guide itself. Other chapters outline strategies and present examples designed to improve skills in reading and interpretation, mastery of materials in the social sciences, natural sciences, and literature, correctness and effectiveness of expression, and general mathematical ability. The document includes addresses for sources of further information.

1466. Fay, Leo, comp. Reading in the Content Fields: An Annotated Bibliography. Newark, Del.: International Reading Association, 1966, 8p. [ED 025 394. Document not available from EDRS. Available from International Reading Association].

This annotated bibliography is composed of 44 citations ranging in date from 1947 to 1966, but emphasizing the 1956 to 1966 period. It is designed to aid teachers by including all major subject matter areas and all major school levels, by offering information of practical value, and by mentioning bibliographies of earlier writings. All entries, which include books, journal articles, and monographs, are arranged alphabetically according to author in one comprehensive alphabet.

1467. Frink, Orrin. A Composite General Graduate Bibliography for Linguistics. Ohio University Occasional Papers in Language, Literature, and Linguistics, Series A, Number 1. Athens: Ohio University, 1966, 15p. [ED 014 258]

The initiation of a graduate program in linguistics at Ohio University, where no undergraduate program existed, necessitated the rapid development of a valid recommended reading list of standard works for students in the new program. Combined to produce a composite general bibliography of linguistics were the items that appeared on at least two of the nine source lists of recommended reading materials that had been received on request from the University of California at Berkeley, Columbia University, George Washington University, the University of Illinois, Indiana University, the Massachusetts Institute of Technology, the University of Pittsburgh, Princeton University and the University of Texas. Numbers added to each bibliographic entry identify the source lists from which the item was taken. Of the 131 items plus eight journals that make up the composite, only two were endorsed by all nine sources, and 66 were recommended by the minimum consensus of two.

1468. Harris, Larry A., comp. Research on Reading in the Content Fields: Language and Literature. ERIC/CRIER Reading Review Series, Volume 2, Bibliography 11. Bloomington: Indiana University, ERIC Clearinghouse on Reading, 227p. [ED 024 539]

Two bibliographies, each of which is divided into two parts, provide information on reading in the content areas of language arts and literature. The first part contains abstracts of documents selected from six basic ERIC/CRIER references. The second part lists annotated materials from a seventh reference in order to provide access to literature on the topics prior to 1950. An author index is also provided for each bibliography. Complete descriptions fo the seven ERIC/CRIER basic references and the availability of the documents within each reference are included.

1469. Hayes, Glenn Warren. The Relationship of Socio-Economic Status of Pupils to Their Comprehensions of Reference Materials Written at Different Levels of Readability. Ed.D. Dissertation, University of Illinois, 1966, 113p. [ED 022 877. Document not available from EDRS. Available from University Microfilms (67-6628)]

A sample of 96 ninth-grade vocational agriculture students in twerty-one Illinois high schools participated in a study of the relationship between socioeconomic status and reading comprehension. An instructional unit was tested for reading level and rewritten at an easier level. Students were

classified by socioeconomic class and randomly assigned to experimental and control groups. They read either the original or rewritten version and responded to a thirty-item criterion test to measure comprehension, and to test six of the Iowa Test of Educational Development. Of three socioeconomic groups, the middle group showed significantly better understanding of principles in the material. Students who read rewritten materials scored higher, but no differences were found between experimental and control groups, or between socioeconomic groups on recall. No differences were found between experimental and control or between socioeconomic groups in reading comprehension, as measured by the Iowa Test of Educational Development.

1470. Herber, Harold L.; Sanders, Peter L., ed. Research in Reading in the Content Areas: First Year Report. Syracuse, N.Y.: Syracuse University, Reading and Language Arts Center, 1969, 113p. [ED 037 305]

The two-fold role of the content-area secondary-school teacher in teaching content and in teaching learning process is investigated in this study sponsored by the USOE Bureau of Research. A research model, called the Structured Overview, showing the relationships among basic elements of the study of the secondary school curriculum is presented, and assumptions clarifying the perspective of the nature and purpose of reading instruction in the content areas used in this research are listed. From this comprehensive research model, several areas were selected for short term interactive studies, which are reported in this monograph. In Section One, "Comprehension," a theoretical construct of levels of comprehension and the development of an evaluative instrument for this construct are explicited. In Section Two, "Lesson Structure," a theoretical paper on the structured overview entitled, "The Use of Vocabulary as an Advanced Organizer," is followed by practical application of the structured overview model to biology. English, mathematics, and earth sciences. In section three, "Attitude Scales," procedures for construction of an attitude scale and a report of the use of one with social studies students, and the use of a scale by students to assess teacher performance, are presented. Projections for continuing the research into the second year are given. Tables and references are included.

1471. Herman, Deldee; Ratliffe, Sharon. Speech in the Junior High School. Michigan Speech Association Curriculum Guide Series, No. 4. Skokie, Ill.: National Textbook Corp., 1968, 55p. [ED 026 391. Document not available from EDRS. Available from National Textbook Corp. (Code No. 5-005-2, $1.65)]

Designed to provide the student with experience in oral communication, this curriculum guide presents a one-semester speech course for junior high school students with "normal" rather than defective speech. The eight units cover speech in social interaction; group discussion and business meetings; demonstrations and reports; creative dramatics; group discussion and business meetings; listening; interpretation; storytelling; and the relationships among language, meaning, and thinking. Each unit contains a statement of lesson objectives, an outline of the lesson content, suggested learning experiences, a bibliography, and a list of audiovisual materials.

1472. Joffe, Irwin. Paragraph Analysis. International Reading Association Convention, Anaheim, Calif., May 6-9, 1970, 4p. [ED 045 293]

Paragraph analysis of college textbooks is concerned with the ability of the student to discover (1) the main idea of the paragraph, and (2) what the rest of the paragraph does. A method for teaching students to find main ideas and understand paragraph relationships is presented. Seven major types of thought relationships (example, explanation, cause-effect, comparison-contrast, conclusion, definition, and reiteration) are used. References are included.

1473. Jones, Daisy Marvel. Reading in the Content Areas, or This Is Not the Same as Reading a Story. Paper presented at the Meeting of the Keystone State Reading Association, Harrisburg, Pa., October 29, 1970, 31p. [ED 046 658]

Effective methods and techniques for teaching reading in the content subjects are discussed. Two ways of providing for individual differences according to the materials used are described: (1) If a common textbook is used, it is suggested that the children be separated into three ability groups, and the class period be sectioned to allow for working with the slow group, supervision of the other two groups, and whole class discussions. (2) For utilizing a variety of materials, suggestions are given for organization of the materials and the class and activities involved in the steps of recognizing background information, identifying the problem, collecting information, organizing information, and sharing information. A consideration of whose responsibility it is to teach content reading skills--the subject teacher or the reading teacher--concludes that the reading teacher is primarily responsible because the task involves reading learnings rather than science, mathematics, or social studies learnings. The subject-area teacher is thus freed to plan her strategies for accomplishing her task which is to help the child get the information.

1474. Karlin, Robert. Developing Reading Ability in the Content Fields. Paper presented at the Lehigh University Reading Conference, Bethlehem, Pa., March 27, 1971, 12p. [ED 050 901]

Content area teachers are not expected to be reading experts, but they can help students overcome reading difficulties. Students often fail to meet the subject-matter demands due to lack of purpose in reading content, unfamiliarity with technical vocabulary, and the heavy concept load and idea density in the material. Teachers can use reading techniques to guide the study of textbooks and other materials. A typical developmental reading lesson consists of five major stages: (1) readiness for reading, (2) silent reading, (3) discussion of the material, (4) rereading, and (5) application. Students should also learn how to establish reading objectives and efficient ways of pursuing them. Useful study skills include locating, selecting, organizing, and remembering information; use of graphic aids and directions; and developing reading flexibility. Strategies the teacher can use to help students to recognize the organization of the book and the pattern of writing, (2) to provide reading-study guides, (3) to use questions and surveys to direct student attention, (4) to teach students how to establish purposes for reading, and (5) to enrich their vocabulary.

1475. Kling, Martin. Power of Reading through Interfacilitation and the Content Areas. Boone, N.C.: National Reading Conference, 1966, 10p. [ED 028 909. Document not available from EDRS. Available from New Frontiers in College-Adult Reading, Fifteenth Yearbook of the National Reading Conference, Appalachian State University]

Four stages of development emerging from a review of the history and the research in the content areas are noted: (1) 300 years with little change in the basis for selecting the curriculum content, (2) a call for research during World War I, (3) study groups airing ideas about subject-matter organization in the 1920s and 1930s, and (4) the beginning of empirical studies in the 1940s. Holmes' substrata-factor theory emphasizing the dynamics of the cognitive process is viewed as the fifth stage of development. Key theoretical concepts from the theory as they apply to the content areas are developed. Findings stimulated by the theory are reported and illustrated by two schematic diagrams of the subfactors involved in power in reading and English literature. Implications for further research and teaching are listed and references are included.

1476. Laffey, James L., ed. Reading in the Content Areas. Bloomington, Ind.: Indiana University. ERIC Clearinghouse on Reading; International Reading Association, Newark, Del., 1972, 247p. [ED 065 829. HC not available from EDRS. Available from International Reading Association ($4.50 nonmembers, $3.00 members)]

The purpose of this monograph is twofold. First, it reviews, analyzes, and synthesizes where possible the findings of selected research related to content reading which has been conducted during the past two decades. Secondly, it describes how the findings of this research apply to classroom instruction. The topics discussed are: "Reading in Literature: The Importance of Student Involvement" (Gallo, Siedow); "Reading in Literature: Student Involvement Is Just the Beginning" (Hasselriis); "Reading in Mathematics: A Review of Recent Research" (Corle); "Reading in Mathematics: Classroom Implications" (Coulter); "Reading in the Sciences: A Review of the Research" (Mallinson); "Reading in the Sciences: Classroom Implications" (Smith); "Reading in the Social Studies: A Review of the Research Since 1950" (Estes); "Reading in the Social Studies: Implications for Teaching and Research" (Herber); The Content Directed Experience and Printed Mass Media: Their Use in the Content Area Classroom" (Brennan).

1477. Laffey, James L., comp. Research on Reading in the Content Fields: General and Other Subjects. ERIC/CRIER Reading Review Series, Volume 2, Bibliography 12. Bloomington: Indiana University, ERIC Clearinghouse on Reading, 1968, 119p. [ED 024 537]

A bibliography, with descriptive abstracts, of articles dealing with research on reading in the content fields is presented. The listing is divided into two parts: a bibliography from research literature which focuses on general content reading skills, and an "other subjects" bibliography selected from literature dealing with areas other than the basic curriculum areas of mathematics, science, language arts, literature, and social studies. Each bibliography contains two parts: documents from six basic ERIC/CRIER references and documents from a seventh ERIC/CRIER

reference providing access to material written on the topics prior to 1950. Each contains an author index. The seven basic ERIC/CRIER references are described, and the availability of documents within each is noted.

1478. Robinson, H. Alan; Thomas, Ellen Lamar, ed. Fusing Reading Skills and Content. Newark, Del.: International Reading Association, 1969, 225p. [ED 036 399. Document not available from EDRS. Available from International Reading Association]

This publication presents a view of the problems of reading in the content fields as they relate to the secondary school curriculum. Part One deals with the beginning and the growth of a comprehensive reading program at the University of Chicago Laboratory School. Eleven of the school's faculty provide insights into how a teacher in hiw own content area can upgrade his students' reading. An administrator and a reading consultant at the same school relate how they support a school-wide reading effort. Papers composing the first part were all presented at a special institute at the 1969 International Reading Association convention. Part Two includes papers presented at other times during the convention but which were related to the general theme and which were in favor of a reading program as "part and parcel" of the content learning program. References are included with many of the individual articles.

1479. The Retarded Reader in the Junior High School. A Guide for Supervisors and Teachers. Brooklyn: New York City Board of Education, 1952, 131p. [ED 001 726]

In 1943 New York City undertook research on retarded readers in the junior high schools. Goals included trying to determine why a large number of pupils with average or better intelligence reach junior high school with retardation of several years in reading level, and the types of remedial instruction materials needed. Special programs are sometimes arranged, such as scheduling classes or exchanging children among classes for remedial periods. Sometimes children within a group are put together for a reading class, or individual help is given. Some schools have special classes for remedial reading. Some thought English teachers should be trained to teach this course. Supplies and materials were needed and there was an insufficient amount to be had. The following recommendations were made: (1) severely retarded readers should be given out-of-class instruction; (2) a program designed to train junior high school teachers in methods of teaching reading should be instituted; (3) a consistent effort should be made to develop and supply appropriate materials; (4) a developmental reading program should be specifically provided in regular classrooms; (5) the departmentalized program of instruction in the junior high school should be reevaluated; (6) child guidance services should be expanded so that they are more available for retarded readers; and (7) the possibility of formulating a new position for "teachers of reading" should be explored. A list of materials to be used for remedial reading in the junior high school is appended.

1480. Sheldon, William D. What Research Tells Us About the Teaching of Reading. Paper presented at the Meeting of the International Reading Association, Atlantic City, N.J., April 19-23, 1971, 16p. [ED 055 729]

A total of 39 research studies done during the period 1967 to 1970 are included in this review. Two of these are doctoral dissertations, and the others are reported in journal articles. The overall concerns are the yougn child and elementary school children. The reviewed studies are divided into five categories: prereading programs and activities, beginning reading instruction, programs and grouping practices, vocabulary and word analysis, and reading achievement and some correlates. The author concludes that a core of reading researchers who might develop important studies is still lacking. He contends that although there are a few individuals who have contributed continuously over the years, less than 20 percent of the studies come from experienced researchers in reading. A bibliography is included.

1481. Shepherd, David L. Reading in the Content Areas--Instruction and Application. Paper presented at the College Reading Association Conference, Knoxville, Tenn., April 1968, 1968, 9p. [ED 020 078]

The theme of this paper is that every teacher is a teacher of reading wherever and whenever the skills are needed. Since the reading consultant is primarily concerned with remediation, the need for implementing reading skills in subject matter courses is in the hands of the teachers in each of these areas. The teaching of the fundamental understandings, the language, and the technical vocabularies peculiar to each content subject are discussed. The identification of specific skills and the determination of procedures and techniques necessary for teaching those skills is emphasized. Fusing the teaching content with reading is important. For example, those reading-study skills common to all content fields require a different and peculiar use in separate subject-matter areas. These differences as they apply to content areas are described, and procedures are suggested for various purposes and types of material. References are included.

1482. Singer, Harry. Factors Involved in General Reading Ability and Reading in the Content Areas. Paper presented at the National Reading Conference, Atlanta, December 4-6, 1969, 21p. [ED 037 313. Document not available from EDRS. Available in Nineteenth Yearcook of the National Reading Conference, Appalachian State University]

A review of research on factors involved in general reading ability and reading in the content areas is presented. In the primary grades, reading comprehension appears to be a specific factor dependent on instructional conditions. During the intermediate grades, common factors emerge and tend to integrate at a more central response level and become common to a variety of reading situations. Factors identified are underlying general reading comprehension at grade 6 appear to be the same as those that emerge at the high school level. General reading ability draws upon factors in the cognitive, linguistic, perceptual, and affective domains. Reading in the content areas draws to some degree upon common factors and to some degree upon specific factors, particularly when comprehension tasks involve skills such as data interpretation. Studies have indicated that when specific vocabulary and

purposes of content reading were stressed, gains in comprehension were noted. Self-selection of content area materials also enhanced comprehension. It was recommended that reading ability should be assessed separately in specific content areas. However, continued stressing of reading in the content areas as part of a developmental reading program may alter the present concept of general reading ability and its assessment. A bibliography is included.

1483. Spaulding, Seth. New Developments in Education for the Seventies. Paper presented at the Third International Reading Association World Congress on Reading, Sydney, Australia, August 7-9, 1970, 18p. [ED 046 649]

Theories relating to proposed improvements in education are discussed. Changes in curricula, contributions of fields such as psychology, and issues currently being debated are given consideration. Innovative models and approaches are proposed, and several interesting speculations are offered related to the future of education. Following the discussion of theory, a number of currently used programs are described. Among them are the Baldwin Whitehall School experiment with individualized instruction in Pennsylvania, the Texarkana/Dorsett Performance Contract, Educational TV Systems in El Salvador and the Ivory Coast, an open university in Great Britain, and a systems approach to reforming Indonesian education. Several proposals for improving teacher education are included in the final section, along with the mention of programs already in existence.

1484. Spencer, Gary D. Evaluating a Content Reading Program for an Inner City High School. Paper presented at the National Reading Conference, Atlanta, Ga., December 4-6, 1969, 12p. [ED 037 314. Document not available from EDRS. Available in Nineteenth Yearbook of the National Reading Conference, Appalachian State University]

An evaluation of an inner-city reading program which involved industry, university consultants, and the administrators and teachers of a large New Jersey high school led to several recommendations: (1) that schools and their faculties genuinely desire to participate in such a reading program, that school systems demonstrate their interest by matching project funds from other sources, and that the industry involved leave any policy changes to the school system; (2) that consultants involved be allowed uninhibited freedom to innovate; (3) that the program be first subjected to a trial period to be evaluated before any continuance of it; (4) that the changes innovated by the program aim at being usable by the classroom teachers and at being beneficial to the learner and to the community; and (5) that as many mutual and interdisciplinary lines of communication as possible lace the program, carrying information in all directions. References are included.

1485. Taschow, Horst G. Reading in the Subject Matter Areas. Regina: Saskatchewan University, December 1970, 13p. [ED 046 669]

Content-area reading begins in grade 1 and is a gradual and continuous development of the reading skills through the grades and beyond. For the student to gain proficiency in this difficult and complex art, theoretical suggestions paired with actual classroom samples in content-area instruction

are discussed. It is hoped that when such an approach is more widely followed by the content-area teachers, young people will more readily appreciate and enjoy the act of reading and its results. Topics presented in this paper include the following: A definition of reading, reading and subject matter, reading readiness, background experiences, general and special vocabulary, setting purposes, and instructional reading levels. References are given.

1486. Working Draft of Guidelines for the Teaching of Reading in the Content Areas. Washington, D.C.: District of Columbia Public Schools, 1971, 88p. [ED 059 859]

General guidelines for teaching reading in content area classrooms and specific suggestions for a number of content areas are included. The general guidelines are intended to familiarize personnel with critical areas in which they can help in developing reading skills. They suggest that teachers be masters of content subject matter, be aware of students' needs in reading, attempt to motivate and instruct students in reading at their individual levels, and be familiar with common reading and language terminology and sources of information. Specific suggestions are presented for art, business, driver education, English, foreign languages, health, home economics, science, and social studies. Each content area section includes sample lesson plans. General references are included.

1487. Zilliax, John. Teaching English to Disadvantaged High School Students. Minnesota English Journal, 4, 1968: pp1-11 [ED 021 829]

Removing a disadvantaged student from his environment and giving him the advantages of a middle-class education may be a mixed blessing for him emotionally. Yet many compensatory summer programs, including Project ABE (A Better Chance) at Carleton College (Minnesota), appear to have caused no deleterious effects. The summer programs are intended to help talented students from disadvantaged environments bridge the gap between their backgrounds and the private boarding schools in which they will enroll. Recognizing that these youths might lose their unique points of view in attempting to conform to new requirements, Carleton English teachers have devised a program to encourage students' uninhibited expression as well as the acquisition of basic skills of communication. The writing program--set off from the area of study skills--centers on a sequence of 12 writing assignments, and the reading programs is built around a core of five short allergorical novels. Another summer program, at Milton Academy in Massachusetts,for under-achieving junior-high Boston youth, is briefly described.

VIII. AUTHOR INDEX

Adams W. Royce
043 493 (1439)

Alston, Juanita S.
001 144 (1419)

Anthony, Homer Bruce
071 023 (1455)

Artley, A. Sterl
053 871 (1456)

Bahe, Virginia R.
036 408 (1457)

Baranoff, Elizabeth S.
065 858 (1420)

Barton, Thomas L.
045 665 (1421)

Beachner, Anna M.
045 665 (1421)

Connors, George C.
046 664 (1394)

Cooper, Minna
022 658 (1395)
022 659 (1397)
023 549 (1396)

Corle, Clyde G.
010 989 (1429)

Cortright, Henrietta H.
026 390 (1458)

Coulter, Myron L.
010 989 (1429)

Courtney, Brother Leonard
022 651 (1459)
032 997 (1460)
046 642 (1461)

Dailey, John T.
017 702 (1462)

Daines, Delva
052 913 (1463)

Davis, O. L., Jr.
027 608 (1398)

Derosier, Cynthia
056 011 (1464)

Donelson, Kenneth L.
045 674 (1422)

Earp, N. Wesley
036 397 (1431)

Emans, Robert
010 606 (1423)

Estes, Thomas H.
041 720 (1399)

Evertts, Eldonna L.
062 336 (1424)

Farley, Eugene J.
019 609 (1465)

Fay, Leo
025 394 (1466)
059 009 (1447)

Folkmer, Paul
021 689 (1425)

Fried, Marian
023 545 (1404)
023 546 (1401)
023 547 (1402)
023 548 (1403)
024 530 (1405)

Friedman, Robert M.
045 360 (1440)

Frink, Orrin
014 258 (1467)

Geyer, James R.
039 157 (1406)

Gilchrist, Mary A.
041 702 (1432)

Goolsby, Thomas M., Jr.
058 278 (1407)

Harris, Larry A.
024 539 (1468)

Harvin, Virginia R.
041 702 (1432)

Hayes, Glenn Warren
022 877 (1469)

Henney, Maribeth
044 243 (1433)

Herber, Harold L.
023 564 (1441)
037 305 (1470)

Herman, Deldee
026 391 (1471)

Houghton, Judy H.
062 335 (1449)

Hurd, Paul Dehart
043 493 (1439)

Joffe, Irwin
045 293 (1472)

Johnson, Roger E.
043 459 (1408)

Jones, Daisy Marvel
046 658 (1473)

Kane, Robert B.
044 237 (1436)

Karlin, Robert
050 901 (1474)

Kinkead, Thomas
020 075 (1426)

Kling, Martin
028 909 (1475)

Kravits, Alvin
014 378 (1409)

Kromhout, O. M.
046 240 (1442)

Laffey, James L.
024 537 (1477)
065 829 (1476)

Levine, Milton
020 075 (1426)

MacDougall, Mary Ann
041 764 (1443)

McCafferty, Donn
024 666 (1410)

Mallinson, George G.
014 380 (1444)

McGuire, George K.
031 498 (1427)

Neyman, Clinton A., Jr.
017 702 (1462)

Olson, Arthur V.
050 914 (1453)

Otto, Wayne
070 072 (1411)

Painter, Helen W.
046 651 (1450)

Preston, Ralph C.
045 531 (1412)

Ratliffe, Sharon
026 391 (1471)

Rauch, Sidney J.
016 570 (1413)

Resnick, Lauren B.
049 909 (1435)

Robinson, H. Alan
036 399 (1478)

Rosenthal, Daniel J. A.
049 909 (1435)

Ross, Ramon Royal
051 230 (1428)

Rudolf, William B.
044 237 (1436)

Sanders, Peter L.
037 305 (1470)

Schleich, Miriam
016 570 (1413)

Schreiner, Robert L.
037 303 (1414)

Shaw, Judith A.
016 587 (1437)

Sheldon, William D.
055 729 (1480)

Shepherd, David L.
020 078 (1481)

Singer, Harry
037 313 (1482)

Smith, Carl Bernard
044 254 (1445)

Spaulding, Seth
046 649 (1483)

Spencer, Gary D.
037 314 (1484)

Stauffer, Russell G.
013 748 (1454)

Stoltman, Joseph P.
058 278 (1407)

Taschow, Horst G.
046 669 (1485)
046 670 (1438)

Thomas, Ellen Lamar
036 399 (1475)

Vitrogan, David
043 481 (1446)

Zilliax, John
021 829 (1487)

Board of Education
Diocese of Cleveland
059 186 (1448)

District of Columbia Public Schools
Washington, D.C.
059 859 (1486)

Memphis City School System
Memphis, Tennessee
048 248 (1417)

New York State Education Dept.
Albany, New York
062 216 (1418)
067 257 (1434)

New York City Board of Education
Brooklyn, New York
001 726 (1479)

Oklahoma State Department of Education
041 700 (1451)

Park Forest Public Schools
District 163
Park Forest, Illinois
048 039 (1400)
048 041 (1415)

San Mateo County Board of Education
Redwood City, California
067 639 (1452)

University City School District
University, Missouri
044 181 (1430)

VIII. DESCRIPTOR TERMS

Academic Achievement
041 764 (1443)
044 181 (1430)

Achievement Rating
010 989 (1429)

Adult Education
019 609 (1465)

Affective Objectives
046 642 (1461)

African Culture
048 041 (1415)

African History
048 041 (1415)

American History
023 545 (1404)
023 547 (1402)
023 548 (1403)
046 664 (1394)

Annotated Bibliographies
025 394 (1466)

Arithmetic
010 989 (1429)
044 181 (1430)
049 909 (1435)
065 829 (1476)

Beginning Reading
055 729 (1480)

Behavioral Objectives
070 072 (1411)

Bibliographies
014 258 (1467)

Classroom Techniques
032 997 (1460)
065 829 (1476)

Cloze Procedure
039 157 (1406)

Cognitive Objectives
046 642 (1461)

College Freshmen
016 570 (1413)

College Mathematics
046 670 (1438)

College Programs
036 408 (1457)

College Science
043 493 (1439)

College Students
045 293 (1472)

Compensatory Education
021 829 (1487)
043 481 (1446)

Computer Assisted Instruction
046 240 (1442)

Content Analysis
036 408 (1457)

Content Reading
014 378 (1409)
014 380 (1444)
016 570 (1413)
020 075 (1426)
020 078 (1481)
022 651 (1459)
022 659 (1397)
023 545 (1404)
023 546 (1401)
023 547 (1402)
023 548 (1403)
023 549 (1396)
023 564 (1441)
024 530 (1405)
024 537 (1477)
024 539 (1468)
025 394 (1466)
028 909 (1475)
032 997 (1460)
036 397 (1431)
036 399 (1478)
037 305 (1470)
037 313 (1482)
037 314 (1484)
041 700 (1451)
041 720 (1399)
044 254 (1445)

Content Reading cont'd.
046 642 (1461)
046 658 (1473)
046 669 (1485)
049 909 (1435)
050 901 (1474)
050 914 (1453)
052 913 (1463)
053 871 (1456)
059 859 (1486)
065 829 (1476)
065 858 (1420)
067 639 (1452)
071 023 (1455)

Context Clues
050 914 (1453)

Course Content
021 689 (1425)
024 666 (1410)

Course Objectives
062 335 (1449)

Course Organization
001 144 (1491)

Critical Reading
045 531 (1412)

Cross Age Teaching
056 011 (1464)

Curriculum Development
045 665 (1421)

Curriculum Guides
001 144 (1419)
022 658 (1395)
022 659 (1397)
023 549 (1396)
026 390 (1458)
026 391 (1471)
059 859 (1486)

Curriculum Planning
062 336 (1424)

Curriculum Research
037 305 (1470)

Developmental Reading
022 658 (1395)
022 659 (1397)
023 546 (1401)
023 549 (1396)
023 564 (1441)
053 871 (1456)
067 639 (1452)

Disadvantaged Youth
043 481 (1446)

Discourse Analysis
044 237 (1436)

Economics
024 666 (1410)

Educational Innovation
046 649 (1483)

Educational Research
027 608 (1398)

Educational Trends
046 649 (1483)

Educationally Disadvantaged
021 829 (1487)

Effective Teaching
036 399 (1478)
045 674 (1422)

Elementary Grades
025 394 (1466)
043 459 (1408)
059 186 (1448)

Elementary School Mathematics
016 587 (1437)
041 702 (1432)
044 243 (1433)
067 257 (1434)

Elementary School Science
041 764 (1443)
045 360 (1440)

Elementary School Students
010 989 (1429)
046 651 (1450)
055 729 (1480)

Elementary Science
014 380 (1444)

English Curriculum
059 186 (1448)

English Education
062 336 (1424)
065 858 (1420)

English Instruction
010 606 (1423)
021 829 (1487)
031 498 (1427)
051 230 (1428)
065 858 (1420)

Equivalency Tests
019 609 (1465)

Ethnic Relations
048 040 (1416)

Ethnic Studies
048 039 (1400)
062 216 (1418)

Evaluation
041 764 (1443)

Fundamental Concepts
020 078 (1481)

Grade 3
058 278 (1407)

Grade 4
044 243 (1433)

Grade 7
022 658 (1395)
022 659 (1397)
023 549 (1396)

Grade 8
023 545 (1404)
023 546 (1401)
023 547 (1402)
023 548 (1403)
024 530 (1405)
048 248 (1417)

Grade 9
020 075 (1426)

Graduate Study
014 258 (1467)

Graphs
027 608 (1398)

Guidelines
059 186 (1448)

Guides
019 609 (1465)

High School Curriculum
036 399 (1478)
037 305 (1470)

High School Students
010 606 (1423)
022 877 (1469)
051 230 (1428)

Historical Reviews
028 909 (1475)

Immigrants
048 039 (1400)

Individual Differences
020 075 (1426)

Individual Study
067 257 (1434)

Individualized Instruction
046 658 (1473)

Instruction
041 764 (1443)
045 360 (1440)
067 257 (1434)

Instructional Materials
043 493 (1439)
046 658 (1473)
051 230 (1428)
056 011 (1464)
058 278 (1407)

Instructional Programs
046 649 (1483)

Interdisciplinary Approach
048 248 (1417)
048 041 (1415)

Intergroup Education
048 040 (1416)

Jr. High School Students
026 391 (1471)
027 608 (1398)
037 314 (1484)
052 913 (1463)

Jr. High Schools
001 726 (1479)

Journalism
062 335 (1449)

Junior Colleges
045 665 (1421)

Language Arts
024 539 (1468)
041 700 (1451)
045 665 (1421)
048 248 (1417)
059 186 (1448)
062 335 (1449)
062 336 (1424)
070 072 (1411)

Language Development
056 011 (1464)

Learning
027 608 (1398)

Linguistics
014 258 (1467)

Literature
024 539 (1468)
024 666 (1410)
045 674 (1422)
065 829 (1476)

Literature Guides
020 075 (1426)

Literature Reviews
055 729 (1480)

Mass Media
062 335 (1449)

Mathematical Vocabulary
036 397 (1431)

Mathematics
044 237 (1436)

Mathematics Instruction
046 670 (1438)
049 909 (1435)

Mechanics (Process)
017 702 (1462)

Metropolitan Areas
048 039 (1475)

Mexican Americans
048 040 (1416)

Models
028 909 (1475)

Multimedia Instruction
046 240 (1442)

Negro Culture
062 216 (1418)

Negro History
062 216 (1418)

Oral Reading
046 651 (1450)

Paragraph Composition
045 293 (1472)

Poetry
046 651 (1450)

Physics Instruction
046 240 (1442)

Predictive Measurement
039 157 (1406)

Prevocational Education
017 702 (1462)

Primary Grades
013 748 (1454)

Problem Solving
041 702 (1432)
044 243 (1433)
049 909 (1435)

Program Evaluation
053 871 (1456)

Program Improvement
046 649 (1483)

Programmed Materials
041 764 (1443)

Questioning Techniques
037 303 (1414)

Racism
062 216 (1418)

Readability
013 748 (1454)
016 587 (1437)
039 157 (1406)
043 459 (1408)
044 237 (1436)

Reading
017 702 (1462)
043 481 (1446)
043 493 (1439)
044 181 (1430)
045 360 (1440)
062 336 (1424)
070 072 (1411)

Reading Ability
037 313 (1482)
059 009 (1447)

Reading Achievement
023 564 (1441)
041 702 (1432)

Reading Comprehension
014 378 (1409)
022 651 (1459)
022 877 (1469)
037 303 (1414)
037 313 (1482)
039 157 (1406)
041 720 (1399)
044 243 (1433)
044 254 (1445)
045 531 (1412)
049 909 (1435)
050 914 (1453)

Reading Consultants
037 314 (1484)

Reading Development
001 144 (1419)
037 313 (1482)
043 493 (1439)
056 011 (1464)
065 858 (1420)

Reading Habits
062 335 (1449)

Reading Improvement
016 570 (1413)
041 700 (1451)

Reading Instruction
010 606 (1423)
022 651 (1459)
024 530 (1405)
025 394 (1466)
031 498 (1427)
036 397 (1431)
044 254 (1445)
045 531 (1412)
046 642 (1461)
046 658 (1473)
046 669 (1485)
046 670 (1438)
050 901 (1474)
059 859 (1486)
065 858 (1420)
067 639 (1452)
071 023 (1455)

Reading Interests
041 700 (1451)
046 651 (1450)

Reading Level
013 748 (1454)

Reading Materials
014 258 (1467)
036 408 (1457)

Reading Processes
037 303 (1414)

Reading Programs
023 464 (1441)
024 537 (1477)
036 399 (1478)
037 314 (1484)
041 700 (1451)
046 649 (1483)
053 871 (1456)
055 729 (1480)
071 023 (1455)

Reading Readiness
046 669 (1485)

Reading Research
013 748 (1454)
023 564 (1441)
024 537 (1477)
024 539 (1468)
028 909 (1475)
036 397 (1431)
037 305 (1470)
037 313 (1482)
041 702 (1432)
041 720 (1399)
046 664 (1394)
055 729 (1480)
065 829 (1476)
071 023 (1455)

Reading Skills
010 606 (1423)
010 989 (1429)
014 378 (1409)
014 380 (1444)
016 570 (1413)
020 078 (1481)
021 689 (1425)
022 651 (1459)
024 537 (1477)
036 408 (1457)
037 303 (1414)
045 293 (1472)
046 664 (1394)
046 669 (1485)
050 901 (1474)
050 914 (1453)
051 230 (1428)
052 913 (1463)
058 278 (1407)
067 257 (1434)
070 072 (1411)

Reading Tests
046 664 (1394)

Relationship
010 989 (1424)
041 702 (1432)

Relevance (Education)
045 674 (1422)

Remedial Reading Programs
001 726 (1479)

Research Reviews
028 909 (1475)

Resource Guides
059 859 (1486)

Retarded Readers
001 726 (1479)

Retention
045 360 (1440)

School Industry Relationship
037 314 (1484)

Science Education
043 481 (1446)

Science Materials
044 254 (1445)

Secondary Education
001 144 (1419)
019 609 (1465)
026 390 (1458)
067 639 (1452)

Secondary Grades
025 394 (1466)
059 186 (1448)
059 859 (1486)

Secondary School Mathematics
016 587 (1437)
046 670 (1438)

Secondary School Students
021 689 (1425)
021 829 (1487)

Secondary Schools
053 871 (1456)
071 023 (1455)

Secondary School Teachers
031 498 (1427)

Skills
044 181 (1430)

Skill Development
043 481 (1446)

Social Sciences
058 278 (1407)

Social Studies
022 658 (1395)
022 659 (1397)
023 547 (1402)
023 548 (1403)
023 549 (1396)
024 530 (1405)
027 608 (1398)
039 157 (1406)
043 459 (1408)
045 531 (1412)
048 248 (1417)

Social Studies Units
023 545 (1404)
023 546 (1401)
024 666 (1410)
048 039 (1400)
048 040 (1416)
048 041 (1415)

Socioeconomic Status
022 877 (1469)

Speech Curriculum
026 390 (1458)
026 391 (1471)

Speech Instruction
026 390 (1458)
026 391 (1471)

Spelling
059 009 (1447)

Student Certification
019 609 (1465)

Student Participation
058 278 (1407)

Study Guides
021 689 (1425)

Study Habits
043 493 (1439)
067 257 (1434)

Study Skills
014 378 (1409)
016 570 (1413)
022 651 (1459)
036 408 (1457)
041 720 (1399)
050 901 (1474)
052 913 (1463)
067 639 (1452)
070 072 (1411)

Success Factors
044 181 (1430)

Supervisors
001 726 (1479)

Supplementary Reading Materials
024 666 (1410)

Talented Students
021 829 (1487)

Teacher Education
031 398 (1427)
045 665 (1421)

Teacher Responsibility
031 498 (1427)

Teaching Guides
001 726 (1479)
023 545 (1404)
023 546 (1401)
023 547 (1402)
023 548 (1403)
024 530 (1405)
048 039 (1400)
048 040 (1416)
048 041 (1415)
048 248 (1417)
056 011 (1464)

Teaching Methods
021 689 (1425)
045 674 (1422)

Teaching Procedures
046 658 (1473)

Teaching Techniques
001 144 (1419)
045 531 (1412)
045 665 (1421)
050 901 (1474)
051 230 (1428)

Textbook Content
036 397 (1431)

Textbook Evaluation
016 587 (1437)
043 589 (1408)

Textbooks
017 702 (1462)
044 237 (1436)
045 293 (1472)

Transportation
017 702 (1462)

Tutorial Programs
046 240 (1442)

Underachievers
010 606 (1423)

United States History
062 216 (1418)

Verbal Learning
044 243 (1433)

Vocabulary
013 748 (1454)
016 587 (1437)

Vocabulary Development
014 378 (1409)
046 669 (1485)

Vocabulary Skills
020 078 (1481)
041 720 (1399)

Vocational Agriculture
022 877 (1469)

Word Recognition
050 914 (1453)